Australasian Soil and Plant Analysis Council Inc.

ASPAC Soil Proficiency Testing Program Report

2016

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July 2019

ISSN # 1445-5234
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An appropriate citation for this report is:

Lyons, D.J., Sparrow ,L.A. and Hill, R.J. (2019). *ASPAC Soil Proficiency Testing Program Report 2016,94+* v pp. ASPAC, Melbourne, Victoria.

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Foreword

This is the latest of ASPAC's many inter-laboratory proficiency program (ILPP) reports for soils since 1993. This reporting format for soils has applied since ASPAC's 2004-05 annual program (see Rayment *et al*. 2007)[1]. Nowadays, ILPPs for common soil chemical tests have three "rounds" each of four carefully prepared and milled air-dry soils. Similar annual programs for milled plant tissue samples operate concurrently (e.g., Lyons *et al.*2013)[2].

This ILPP continued ASPAC's Australasian focus and targeted laboratories in the private, government and university sectors that provide soil testing services for a range of purposes. These mostly locate in Australia, New Zealand, Oceania, and in parts of South-east Asia.

The Service Provider for ASPAC is Global Proficiency Ltd. This company operates mainly out of New Zealand, with key personnel and contact details provided on page iv.

Technical aspects of this ILPP were specified and over-sighted by ASPAC's Laboratory Proficiency Committee (LPC), recent membership of which is listed on page iv. In addition, LPC members and two key personnel from the Service Provider participate annually in a Technical Advisory Group (TAG), chaired by a senior representative of the Service Provider.

The ASPAC-LPC and the ASPAC Executive Committee also appreciate the efforts made by laboratories who utilized this method-specific proficiency program. By participating, they share a commitment to and responsibility for perceived measurement quality across Australasia, noting that proficiency in measurement is only a component of laboratory accreditation to Australian Standard AS ISO/IEC 17025-2005, which should be an achievement goal for laboratory managers.

An electronic copy of this report, and other similar completed annual program reports, can be downloaded from ASPAC's public web site at www.aspac-australasia.com.

Dr Roger Hill
Convenor, ASPAC-LPC

[1]Rayment, G.E., Peverill, K.I., Hill, R.J., Daly, B.K., Ingram, C. and Marsh, J. (2007). ASPAC Soil Proficiency Testing Program Report 2004-05. (73 + vi pp.) ASPAC, Melbourne, Victoria.

2 Lyons, D.J., Rayment, G.E., Daly, B.K., Hill, R.J., Ingram, C. and Marsh, J. (2013). "ASPAC Plant Proficiency Testing Program Report 2008-09". (47 + vi pp.) ASPAC, Melbourne, Victoria.

Acknowledgements

Those commissioned by GPL to prepare soil samples and confirm homogeneity prior to circulation for proficiency testing purposes [Department of Environment and Science (DES) Queensland, Australia]are acknowledged, as are operational staff of GPL.

Memberships

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[A] ***Note:*** GPL, under its "SoilChek" logo, is accredited by IANZ (the New Zealand accreditation authority) to ISO/IEC 17043:2010 standard, noting that IANZ is a full member of both the International Laboratory Accreditation Cooperation (ILAC), and Asia Pacific Laboratory Accreditation Cooperation (APLAC). GPL is also recognized by NATA (National Association of Testing Authorities of Australia) as a proficiency provider.

Contents

1. Introduction

This not-for-profit, annual ASPAC Soil Proficiency Testing Program Report for 2016documents program methodology, summary statistics, and a full listing of results by test for three "rounds" of soil chemical testing. For historical details on earlier annual soil ILPP's undertaken by ASPAC, refer to Rayment *et al*. (2007) referenced earlier in this report. These reports are also available for downloading from ASPAC's public web site at *www.aspac-australasia.com.*

The report includes an outline of how ASPAC now confers performance-based, method-specific certification to laboratories that regularly participate. To respect confidentiality, the cross-reference between laboratory name and laboratory identification number is not included. However, laboratories certified as proficient for specific tests in this annual program were documented at the time on ASPAC's public web site.

2. Program Details

2.1 Responsibilities

GPL-see page iv -under its "SoilChek" arrangements, was contracted by ASPAC as the soil ILPP provider for 2016. Accordingly, GPL had responsibility on a "round-by-round" basis for sourcing and preparation of samples, for ensuring the samples met international and/or within-country quarantine requirements, and for the timely supply of samples to participating laboratories. GPL also undertook data analysis and "round-by-round" reporting for ASPAC, and assembled the summary and "raw" data provided in Section 3 and Appendix 4, respectively, of this report.

ASPAC's LPC- see page iv- had responsibility to implement and resolve matters of policy and to provide guidance on technical matters specific to soil chemical testing both to GPL and to laboratory participants. The LPC also undertook occasional checks and audits for quality control purposes, participated in the earlier mentioned TAG, contributed to training workshops, and assisted (on request) laboratory managers with technical aspects on measurement improvement. As always, laboratory managers were encouraged to seek help from ASPAC when shown to be operating at levels of measurement performance below their peers.

Participants receive or have a unique, confidential laboratory number, subsequently used to identify the origin of each result presented in program reports and lists of results. This identification number has typically carried forward from one annual program to the next, but code numbers changed in 2014-15 and beyond.

ASPAC's web-site manager and others updated the public web site with details on method-specific certifications and lists of laboratories that undertook those soil tests. The proficiency data used was supplied by GPL and over-sighted by the Convener of the ASPAC-LPC.

2.2 Soil program participation

Some 59 laboratories submitted results for at least one soil test in 2016, the same number as 2014-15. Names and other summary contact details for the participants are provided in Appendix 1. There were 41 laboratories involved from Australia, a decrease of 4 from 2014-15 (NSW=10; QLD=10; VIC=7; SA=5; WA=7, TAS=1; ACT=1), 7 from New Zealand (a decrease of one from 2014-15), but an increase of 5 from South East Asia and the south Pacific which was very pleasing – this included 2 each from Fiji, Papua New Guinea, Thailand and Vietnam and 1 (one) each from Indonesia, Laos and the Philippines.

Most reported results (see Table 2.1) across the three "rounds" combined were submitted for method 4A1 (49 average for pH, 1:5 soil-water) followed by method 3A1 (48 average for electrical conductivity, 1:5 soil-water). These were increases of 5 and 6 results respectively on results for 2014-15. The median was 19 laboratories for each method, which was the same as 2014-15.

Table 2.1. Test methods, corresponding method codes and the arithmetic average number of results per round submitted by participating laboratories in the ASPAC 2016 soil ILPP.

Soil Tests	Method Codes[i]	Number of participants		
		Mar 16	Jun 16	Sep 16
Air Dry Moisture	2A1	35	37	36
Electrical conductivity 1:5 soil-water	3A1	47	48	50
Soil pH, 1:5 soil-water	4A1	46	49	52
Soil pH, 1:5 0.01 M $CaCl_2$ — direct	4B1 + 4B3	13	14	16
Soil pH, 1:5 0.01 M $CaCl_2$ — indirect	4B2 + 4B4	19	18	19
Water soluble Cl — pooled	5A1+ 5A2 + 5A3	29	30	29
Organic Carbon —W&B	6A1	26	27	31
Total Organic C — Pooled	6B1 + 6B3 + 6B5	25	22	20
Total C — Dumas	6B2	30	29	29
Total N – Dumas	7A5	28	26	29
Total N – Pooled	7A1 + 7A2	13	13	18
Water Soluble Nitrate N — autocolour	7B1 + 7B2	16	18	17
KCl Extractable Nitrate N — autocolour	7C2	28	25	27
KCl Ext. Ammonium N — autocolour	7C2	32	30	32
Total P – all methods %	Pooled	24	22	28
Colwell Extractable P	9B1 + 9B2	30	29	30
Olsen Extractable P	9C1 + 9C2	24	24	28
Bray-1 Extractable P	9E1 + 9E2	15	15	19
Acid Extractable P	9G1 + 9G2	11	10	12
Phosphorus buffer index (with Colwell P)	9I2a+ 9I2b+ 9I2c[ii]	22	21	21
Phosphorus buffer index (unadj)	9I4a+ 9I4b + 9I4c[ii]	15	14	13
Phosphate Extractable S	10B1 + 10B2+ 10B3	11	10	10
KCl 40 Extractable S	10D1	18	16	20
DTPA Extractable Fe	12A1	26	24	30
DTPA Extractable Cu	12A1	26	24	30
DTPA Extractable Mn	12A1	26	24	30
DTPA Extractable Zn	12A1	26	24	30
$CaCl_2$ Extractable B — manual colour	12C1 + 12C2	18	17	21
Exchangeable Ca — 1M NH_4Cl extract	15A1	19	18	21
Exchangeable Mg — 1M NH_4Cl extract	15A1	19	18	21
Exchangeable Na — 1M NH_4Cl extract	15A1	19	18	20

Soil Tests	Method Codes[i]	Number of participants		
		Mar 16	Jun 16	Sep 16
Exchangeable K — 1M NH_4Cl extract	15A1	19	18	21
Exchangeable Ca — 1M NH_4OAc extract	15D3	21	23	24
Exchangeable Mg — 1M NH_4OAc extract	15D3	21	23	24
Exchangeable Na — 1M NH_4OAc extract	15D3	21	23	24
Exchangeable K — 1M NH_4OAc extract	15D3	26	27	27
Exchangeable Al — 1M KCl extract	15G1	15	14	13
Bicarbonate Extractable K	18A1	9	10	9
Aluminium	18F1	13	14	14
Boron	18F1	13	13	14
Calcium	18F1	12	13	14
Copper	18F1	13	14	15
Iron	18F1	13	14	15
Magnesium	18F1	12	13	14
Manganese	18F1	13	14	15
Phosphorus – ICP	18F1	12	13	14
Potassium	18F1	12	13	14
Sodium	18F1	12	13	14
Sulphur	18F1	10	12	12
Zinc	18F1	13	14	15

Table 2.2. Methods, corresponding method codes and the arithmetic average number of results per round for NOT ASSESSABLE soil tests submitted by participating laboratories in the ASPAC 2016 soil ILPP

Soil Tests – NOT ASSESSABLE	Method Codes[iii]	Number of participants		
		Mar 16	Jun 16	Sep 16
Total Organic Matter (%)	6G1	5	6	5
Aqua Regia Digestible Calcium (mg/kg)	17B1 + 17B2	5	8	8
Aqua Regia Digestible Copper (mg/kg)	17B1 + 17B2	5	8	8
Aqua Regia Digestible Iron (mg/kg)	17B1 + 17B2	5	7	9
Aqua Regia Digestible Magnesium (mg/kg)	17B1 + 17B2	5	8	9
Aqua Regia Digestible Manganese (mg/kg)	17B1 + 17B2	5	7	9
Aqua Regia Digestible Sodium (mg/kg)	17B1 + 17B2	5	8	9
Aqua Regia Digestible Zinc (mg/kg)	17B1 + 17B2	5	8	9

NOT ASSESSABLE tests are those for which there were insufficient results reported for statistical analysis (<7), and therefore unable to be certified.

1 Unless otherwise indicated, soil method codes are as defined by Rayment, G.E. and Lyons, D.J. (2011). *Soil Chemical Methods - Australasia*. CSIRO Publishing, Collingwood, Victoria, Australia.

[1] These are ASPAC endorsed tests, where "O" in the code refers to Olsen extractable P, and "C" refers to Colwell extractable P. See the table Notes for more details.

2.3 Tests and methods

The three proficiency "rounds" for soils – each comprised of four samples – were offered in March, June and September, 2016. Participants were invited to analyse each sample by the methods listed and/or coded in Table 2.1. Participants were not required to submit results for all of the methods listed, noting that selected methods, including phosphate buffer index (Colwell) and phosphate buffer index (Olsen), were "scored" as one method each, irrespective of which analytical finish was used. This "pooling" also occurred for extractable P tests and some others, with details provided in Table 2.3. 'Pooling' test results is done for tests which the LPC deem to be equivalent and should therefore yield the same results. The most common instance is where a common extraction may have different analytical finishes, e.g. atomic absorption spectroscopy (AAS) or inductively coupled plasma optical emission spectroscopy (ICP-OES). Grouping these tests together reduces the total number of tests and also provides larger datasets for statistical analysis. Data summaries in Section 3 also indicate where there was method "pooling".

Participating laboratories were required by ASPAC to report all tests either air dry (40ºC) or oven dry (105ºC)soil-weight basis (not a soil-volume basis), as per the reporting guidelines published by Rayment and Lyons (2011).Indeed, routine soil fertility tests in Australia are mostly reported on an air-dry (40ºC) soil-weight basis. Those results reported on an oven-dry result in this report therefore required a final calculationusing the air-dry moisture percentage included in the program as method-code 2A1.

Table 2.3. Method "pooling" summary for the ASPAC 2016 soil ILPP

Soil Tests	Method Codes	Average participants
Soil pH, 1:5 0.01 M $CaCl_2$ - direct, pooled air dry	4B1 + 4B3	14
Soil pH, 1:5 0.01 M $CaCl_2$ - indirect, pooled air dry	4B2 + 4B4	14
Water Soluble Cl – Pooled	5A1 + 5A2 + 5A3	29
Total Organic Carbon – Pooled %	6B1 + 6B3	22
Total Nitrogen – Pooled %	7A1 + 7A2	15
Total P – pooled % oven dry	All methods	25
Colwell Extractable P – pooled mg/kg air dry	9B1 + 9B2	30
Olsen Extractable P – pooled mg/kg air dry	9C1 + 9C2	25
Bray-1 Extractable P – pooled mg/kg air dry	9E1 + 9E2	16
Acid Extractable P – pooled mg/kg air dry	9G1 + 9G2	11
Phosphorous Buffer Index (Colwell) L/kg dry wt	9I2a + 9I2b + 9I2c	21
Phosphorous Buffer Index (Unadj) L/kg dry wt	9I4a + 9I4b + 9I4c	14

Soil Tests	Method Codes	Average participants
Phosphate Extractable S, pooled mg/kg air dry	10B1 + 10B2 + 10B3	10
Hot $CaCl_2$ Extractable B – pooled mg/kg air dry	12C1 + 12C2	19

2.4 Sample preparation and identification

In common with practices since the 2004-05 soils program, potential samples were assessed for homogeneity by laboratories accredited to ISO/IEC 17025 standard. Specifically, 10 containers of each sample were selected at random and batched according to the principles described by Thompson and Wood (1993)[3].These sub-samples were then tested in duplicate for Total N by Dumas Combustion.

Results from the homogeneity testing were subsequently statistically assessed according to ISO REMCO Protocol N231 "*Harmonised Proficiency Testing Protocol*" of January 1992. All prepared soils were rated as homogenous, as demonstrated in Appendix 2. In addition to testing for homogeneity, the soil samples were irradiated or otherwise rendered biologically benign to comply with international and/or national biosecurity regulations or requirements[4].

Ultimately, the samples used in the three "rounds" of the 2016 program were distributed and coded as follows: March 2016 (Round 3) ASS 1603-1 to 1603-4; June 2016 (Round 6) ASS 1606-1 to 1606-4; and September 2016 (Round 9) ASS 1609-1 to 1609-4. The association between sample code and origin of the various soils is provided in Table 2.4.

Table 2.4. Sample identification and the origin of the samples included in the ASPAC 2016 soil ILPP

Sample ID	*Round ID*	*Sample Origin*	*Previous Rounds*
ASS 1603-1	**3**	NSW	N/A
ASS 1603-2		NSW	Round 214 ASS1412-4
ASS 1603-3		NZ	Round 214 ASS1412-1
ASS 1603-4		NSW	N/A
ASS 1606-1	**6**	NSW	Round 414 ASS1503-2
ASS 1606-2		QLD	Round 614 ASS1506-3 Round 613 ASS1406-3
ASS 1606-3		NSW	N/A
ASS 1606-4		NSW	N/A
ASS 1609-1	**9**	VIETNAM	Round 614 ASS1506-2
ASS 1609-2		TAS	N/A
ASS 1609-3		NSW	N/A
ASS 1609-4		TAS	Round 614 ASS1506-1

[3] Thompson, M and Wood, R. (1993). International harmonized protocol for proficiency testing of (chemical) analytical laboratories. *Journal of AOAC International* ***76*** (4), 926 – 940.

[4] Rayment, G.E.(2006). Australian efforts to prevent the accidental movement of pests and diseases in soil and plant samples. *Commun. Soil Sci. Plant Anal*. **37**, 2107-2117.

2.5 Data analysis and periodic reporting

Laboratory results, after submission to the Service Provider, were entered into a database and double-checked for data transfer accuracy and required soil-moisture status prior to data processing.

The non-parametric assessment of laboratory performance for each sample and method (and/or "pooled" methods) was performed by an iterative statistical procedure similar to that used in the WEPAL inter-laboratory proficiency programs of Wageningen University. This procedure[5,6,7,8] is suited to datasets of as few as six to seven laboratories, although larger laboratory populations are preferred. An outline of the median / MAD statistical procedure is provided in Appendix 3, with terms described in Table2.4.In addition to medians and MADs, other statistical parameters (also described in Table 2.5) were calculated before and following the omission of non-conforming results. The "raw" data submitted by participating laboratories on a test-by-test basis are documented in Appendix 4, sometimes after rounding only for table formatting purposes.

Results submitted by each laboratory were expected to reflect the procedural and reporting guidelines in the chapter on that topic in Rayment and Lyons (2011). Like other programs nationally and internationally, the program did not accept as a numeric value a result reported as less than (<) or greater than (>) a specified number. In cases where the expected value was below the laboratory's lower limit of reporting, the expectation was that the laboratory would report a value half way between that value and zero. For high values, dilution was the option.

Interim "round" reports, summarizing measurement performance relative to the performance of all laboratories in the program that undertook the same test/s, were routinely and promptly e-mailed to laboratory participants. The main purpose of the interim reports was to provide feedback and to enable laboratories to take prompt action where appropriate. Interim reports also provided an opportunity to correct for data-transfer and data-processing misinterpretations. In addition, regular Newsletters from the Service Provider went to participating laboratories, adding to the information provided in ASPAC's own Newsletter to its members (the *ASPAC Digest*).

Laboratories that participated in the 2016 soil ILPP each received from the Service Provider (on behalf of ASPAC) a laboratory specific, confidential, annual summary report. Each laboratory's data for the 12 soil samples, the aggregate data from all participants, other relevant statistical data, and whether or not the test/s received ASPAC Certification (if applicable) were provided. The laboratory code number was included.

2.6 ASPAC certification of laboratories for soil tests

Subject to satisfactory measurement performance for twelve samples across three sequential "rounds", typically over the twelve-month period, ASPAC awarded participating laboratories with a printed, signed and dated *Certificate of Proficiency.* The *Certificate of Proficiency* identified performance for each test that met criteria set in

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5 Houba, V.J.G., Uittenbogaard, J. and Pellen, P. (1996). Wageningen evaluating programmes for analytical laboratories (WEPAL), organization and purpose. *Commun. Soil Sci. Plant Anal.* **27**, 421-429.

6 Montford, M.A.J. van. (1996). Statistical remarks on laboratory–evaluating programs for comparing laboratories and methods. *Commun. Soil Sci. Plant Anal*. ***27***, 463-478.

7 Rayment, G.E., Miller, R.O. and Sulaeman, E. (2000). Proficiency testing and other interactive measures to enhance analytical quality in soil and plant laboratories. *Commun. Soil Sci. Plant Anal.* ***31***, 1513-1530.

8 Whitehouse, M.W. (1987). Medians and MADs - Statistical methodology used at Wageningen, The Netherlands, for interlaboratory comparisons in the plant exchange program. Ag. Chem. Br. Report, ACU87/36. 10 pp. (Qld Dept. Primary Ind., Brisbane.)

advance by ASPAC. Method specific certification applied when a laboratory incurred no more than four demerit points for the twelve samples in the program year.

Demerit points (if any) were allocated through the identification of “outliers” and “stragglers” (see Appendix 3) by the “median / MAD” statistical procedure mentioned earlier in this report. Two demerit points were allocated to each statistical “outlier”, while a statistical “straggler” was allocated one demerit point. As no sample result could be both an “outlier” and a “straggler”, a maximum of two demerit points is all that could accrue per sample for a specific test.

Three (3) was set as the maximum number of demerit points for a specific test, that could be accrued in any one round of four samples. This was done so that unsatisfactory measurement for a test in one “round” did not in itself result in failure to be certified for that test across the three “rounds” in the designated 12-month period.

If a “round” was missed, the maximum number of three demerit points for every test in that “round” was allocated, unless very special circumstances applied and were known or advised expeditiously to ASPAC’s LPC through its Convenor. When the explanation was accepted, performance from the three most recently completed “rounds” was used to assess eligibility for certification. No exceptions applied to this annual program.

Finally, when six (6) laboratories or less submitted results for a particular test and/or sample (including for “pooled” tests), proficiency assessments could not be made statistically with an acceptable level of confidence and hence certification for the affected test/s could not be granted. Importantly, ASPAC’s *Certificates of Proficiency* are only issued on completion of each annual program of three “rounds”. Moreover, ASPAC provide details of certified laboratories by test on its public web site. Those certifications remain valid until superseded by corresponding findings from the next annual soil program.

Table 2.5. Statistical terms and their meanings in the context of this ASPAC annual report

Statistical term	*Meaning and/or derivation*
Count or number	Original population size.
Maximum i	The highest of a range of values, based on the initial data set.
Minimum i	The lowest of a range of values, based on the initial data set.
Median	The median is the score (value) at the 50th percentile, also called the 2nd quartile or 5th decile. It is the score or potential score in a distribution of scores, above which and below which one-half of the frequencies fall. It is the middle observation of a sequentially sorted array of numbers, except in the case of an even sample size. Here it is the arithmetic mean of the two observations in the middle of the sorted array of observations. The median of a reasonably sized array of numbers is insensitive to extreme scores.
Mean[A]	The arithmetic mean (or average) is the sum of the values of a variable divided by their number. It represents the point in a distribution of measurements about which the summed deviations equals zero. The arithmetic mean is sensitive to extreme measurements.
MAD	The Median of the Absolute Deviations, calculated as the median of the absolute values of the observations minus their median.
Interquartile range (IQR)	This is calculated by subtracting the score at the 25th percentile (referred to as the first quartile; Q_1) from the score at the 75th percentile (the third quartile; Q_3). This value is affected by the assumptions made in the calculation of the first and third quartiles, particularly for low population sizes. Moreover, these differences exist within and across statistical software packages. Prior to the 2004-05 rounds, ASPAC used the algorithm employed by EXCEL and some others. For this program, the algorithm employed was that of SAS Method 4[9]. In summary, IQR = Q_3-Q_1.
Normalized IQR	This equates to IQR x 0.7413, where the latter is a normalizing factor.
Robust % CV[10]	The robust coefficient of variation (Robust % CV) = (100 x normalized IQR / median). For simplicity, the Robust %CVs shown are for the initial results, and for the "final" population of results for a test after the removal of any "outliers" or "stragglers", following one or two iterations.
Integer "i" and the letter "f" associated with medians, means, MADs, IQR and Robust %CVs in data summaries.	The integer "i" relates to the initial data set. The letter "f" relates to the "final" data set, generated after one or two iterations, typically after removal of laboratories with statistical "outliers" (if any), and statistical "stragglers" (if any).

A When the mean is greater than the median, the distribution is positively skewed. When the mean is lower than the median, the distribution is negatively skewed.

9 SAS Procedure Guide.

10 "Guide to NATA Proficiency Testing". 27 pp. (National Association of Testing Authorities, Australia, December 1997).

3. Summary Statistics

This section provides summary data and associated statistics (values sometimes rounded for table formatting purposes) on all tests (plus key "pooled" combinations) for each of the 12 samples used across three soil "rounds" in 2016. The tabulations include initial and subsequent values for the iterative "median / MAD" procedure plus other parametric and robust statistics. Table 2.5 and Appendix 3 have the meaning or derivation of the terms and statistics used in the tabulated summaries.

2016: Air-Dry Moisture Content 2A1 (%)

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	35	35	35	35	37	37	37	37	35	36	36	36
Minimum	0.62	1.04	1.04	1.06	1.31	1.69	1.67	0.92	0.4	2.42	2.96	1.35
Maximum	1.4	8.57	5.34	8.3	2.8	6.26	8.46	8.27	3.56	11.8	9.73	4.25
Median i	1.12	3.91	4.33	5.93	2.37	2.89	4.28	1.63	1.2	9.59	5.94	3.72
Mean i	1.09	3.98	4.21	5.85	2.22	2.99	4.16	1.85	1.19	9.14	5.75	3.45
MAD i	0.1	0.23	0.25	0.33	0.18	0.24	0.33	0.15	0.13	0.815	0.4	0.305
IQR i	0.195	0.595	0.485	0.75	0.53	0.56	0.71	0.29	0.28	1.54	0.898	0.77
Robust CV % i	13	11	8	9	17	14	12	13	17	12	11	15
Median f	1.13	3.9	4.31	5.9	2.46	2.89	4.4	1.66	1.23	9.61	6	3.76
Mean f	1.13	3.94	4.32	5.96	2.42	2.95	4.44	1.66	1.21	9.6	6.04	3.68
MAD f	0.08	0.15	0.09	0.2	0.115	0.14	0.24	0.12	0.11	0.76	0.25	0.23
IQR f	0.158	0.31	0.17	0.43	0.253	0.315	0.465	0.23	0.18	1.46	0.47	0.61
Robust CV % f	10	6	3	5	8	8	8	10	11	11	6	12
Outliers	2	7	4	9	6	8	7	6	5	3	5	5
Stragglers	1	3	8	1	3	2	3	2	1	0	4	0

2016: Electrical conductivity 1:5 soil-water (3A1) dS/m air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	47	47	47	47	49	47	48	48	50	50	50	50
Minimum	0.0861	0.12	0.123	0.131	0.127	0.0074	0.06	0.142	0.06	0.09	0.11	0.12
Maximum	83	187	154	198	1.92	104	1.03	1.81	73.3	91.3	131	140
Median i	0.102	0.222	0.197	0.223	0.165	8.25	0.074	0.165	0.094	0.116	0.151	0.158
Mean i	1.89	4.2	3.47	4.44	0.211	10.1	0.102	0.208	1.57	1.94	2.77	2.95
MAD i	0.004	0.01	0.008	0.013	0.008	0.21	0.00515	0.005	0.004	0.006	0.0105	0.0075
IQR i	0.008	0.021	0.015	0.034	0.018	0.405	0.0105	0.0108	0.009	0.0155	0.0228	0.0173
Robust CV % i	6	7	6	11	8	4	11	5	7	10	11	8
Median f	0.102	0.221	0.197	0.219	0.164	8.27	0.0723	0.164	0.093	0.114	0.15	0.157
Mean f	0.103	0.221	0.196	0.221	0.164	8.24	0.0725	0.165	0.0938	0.115	0.149	0.157
MAD f	0.002	0.007	0.0055	0.008	0.0065	0.17	0.0041	0.004	0.002	0.004	0.0075	0.0045
IQR f	0.004	0.0145	0.0105	0.0168	0.0118	0.29	0.00805	0.00775	0.005	0.0085	0.0145	0.00925
Robust CV % f	3	5	4	6	5	3	8	4	4	6	7	4
Outliers	10	12	7	10	10	8	7	9	13	9	6	6
Stragglers	8	1	2	3	1	2	2	1	4	2	4	4

2016: Soil pH, 1:5 soil-water (4A1)pH Unitsair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	46	46	46	46	50	49	49	49	52	52	52	52
Minimum	5.06	7.79	5.2	5.92	6.88	2.81	6.18	4.56	6.36	5.8	6.11	5.49
Maximum	6.37	8.52	6.35	8.51	8.08	3.44	7.71	5.75	8.53	7.06	7.69	6.65
Median i	5.9	8.22	5.89	8.26	7.86	3.16	7.25	5.5	8.06	6.54	7.2	6.14
Mean i	5.86	8.18	5.88	8.17	7.78	3.13	7.14	5.46	7.95	6.53	7.15	6.12
MAD i	0.075	0.105	0.045	0.105	0.115	0.04	0.19	0.06	0.105	0.065	0.09	0.045
IQR i	0.148	0.255	0.095	0.233	0.22	0.07	0.41	0.11	0.23	0.12	0.165	0.103
Robust CV % i	2	2	1	2	2	2	4	1	2	1	2	1
Median f	5.91	8.23	5.89	8.27	7.89	3.16	7.27	5.51	8.1	6.54	7.2	6.13
Mean f	5.9	8.23	5.89	8.26	7.87	3.17	7.24	5.51	8.09	6.54	7.21	6.13
MAD f	0.06	0.085	0.04	0.075	0.1	0.02	0.16	0.04	0.085	0.06	0.06	0.03
IQR f	0.105	0.165	0.07	0.153	0.183	0.045	0.315	0.07	0.145	0.113	0.12	0.065
Robust CV % f	1	1	1	1	2	1	3	1	1	1	1	1
Outliers	7	3	7	3	5	9	6	7	9	4	6	6
Stragglers	0	3	2	3	1	4	0	2	3	0	3	7

2016: pH CaCl2 Unstirred - Pooled (4B1 + 4B3) pH Units air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	13	13	13	13	14	14	14	14	16	16	16	16
Minimum	4.6	6.8	5	7	6.84	2.89	5.9	4.52	6.5	5.49	6.3	5.13
Maximum	5.2	7.73	5.52	7.88	7.72	3.36	7.07	5.38	7.7	6.33	6.9	5.8
Median i	5.04	7.49	5.4	7.68	7.23	3.11	6.3	4.86	7.39	5.96	6.66	5.48
Mean i	5.02	7.46	5.39	7.64	7.24	3.09	6.38	4.88	7.3	5.95	6.64	5.51
MAD i	0.05	0.11	0.05	0.1	0.13	0.045	0.205	0.05	0.185	0.08	0.05	0.055
IQR i	0.09	0.19	0.1	0.17	0.238	0.0975	0.37	0.0925	0.385	0.153	0.0925	0.123
Robust CV % i	1	2	1	2	2	2	4	1	4	2	1	2
Median f	5.06	7.5	5.42	7.69	7.23	3.13	6.3	4.85	7.4	5.96	6.66	5.46
Mean f	5.06	7.52	5.42	7.7	7.24	3.12	6.29	4.85	7.35	5.96	6.67	5.49
MAD f	0.05	0.095	0.05	0.09	0.13	0.025	0.04	0.045	0.18	0.08	0.03	0.04
IQR f	0.0925	0.183	0.103	0.153	0.238	0.0475	0.065	0.075	0.355	0.143	0.06	0.07
Robust CV % f	1	2	1	1	2	1	1	1	4	2	1	1
Outliers	1	1	1	1	0	3	0	2	1	2	3	3
Stragglers	0	0	0	0	0	1	7	2	0	0	0	0

2016: pH CaCl2 Stirred - Pooled (4B2 + 4B4) pH Unitsair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	19	19	19	19	19	18	18	18	19	19	19	19
Minimum	4.8	7.22	5.22	7.48	6.79	2.86	5.91	4.57	6.9	5.61	6.33	5.27
Maximum	5.45	7.72	5.63	7.85	7.55	3.26	6.65	5.16	7.61	6.17	6.88	5.71
Median i	5.04	7.57	5.43	7.73	7.3	3.15	6.42	4.9	7.4	5.94	6.64	5.5
Mean i	5.07	7.55	5.42	7.7	7.26	3.14	6.4	4.9	7.35	5.93	6.64	5.49
MAD i	0.08	0.11	0.05	0.08	0.04	0.045	0.12	0.045	0.1	0.06	0.07	0.06
IQR i	0.14	0.16	0.1	0.17	0.14	0.08	0.235	0.085	0.215	0.125	0.125	0.125
Robust CV % i	2	2	1	2	1	2	3	1	2	2	1	2
Median f	5.04	7.57	5.43	7.73	7.31	3.15	6.43	4.9	7.42	5.94	6.64	5.5
Mean f	5.06	7.57	5.42	7.7	7.32	3.15	6.43	4.9	7.4	5.93	6.64	5.49
MAD f	0.04	0.085	0.05	0.08	0.025	0.04	0.11	0.035	0.08	0.06	0.06	0.05
IQR f	0.113	0.128	0.09	0.17	0.045	0.08	0.22	0.065	0.15	0.12	0.11	0.11
Robust CV % f	2	1	1	2	0	2	3	1	1	1	1	1
Outliers	1	0	4	0	7	1	1	4	2	2	1	1
Stragglers	4	1	0	0	0	0	0	0	0	0	1	1

2016: Water Ext Cl - Pooled (5A1 + 5A2 + 5A3) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	29	29	29	29	31	30	30	29	29	29	29	29
Minimum	5.8	8.3	6	3.75	5.18	3880	1.85	7.7	2.5	5.86	10	13.5
Maximum	70.9	236	36	39.8	326	11200	160	250	4140	4080	15600	4150
Median i	48	29.7	18.6	9.95	12.5	6110	13	27.2	7	12.4	16	20.6
Mean i	45.3	39.9	19.1	12.6	38.1	6420	27.8	43.6	156	161	582	171
MAD i	4	2.7	2	1.95	3.6	360	4.7	3	2.4	2.8	2.7	4.1
IQR i	9.4	6.7	3.2	4.15	7.12	800	10.7	5.8	4.95	5.5	6.8	8.1
Robust CV % i	15	17	13	31	42	10	61	16	52	33	32	29
Median f	48	29.6	18.6	9	11.3	6110	9.31	25.6	5.25	10.5	14.9	19.6
Mean f	48.1	29.8	18.7	9.14	10.8	6120	10.1	25.6	6.02	10.8	15.2	19.7
MAD f	3	1.4	1.2	1.1	3.12	155	3.99	2.15	1.5	2.05	2.35	3.2
IQR f	5	2.75	2.4	2	5.51	325	6.4	3.98	2.93	4.02	4.3	6.33
Robust CV % f	8	7	10	16	36	4	51	12	41	28	21	24
Outliers	7	8	5	5	6	7	6	7	6	5	5	5
Stragglers	1	1	1	3	1	3	1	0	1	2	0	0

2016: Organic Carbon — W&B (6A1) % oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	26	26	26	26	27	27	27	27	30	31	31	31
Minimum	0.69	0.499	2.86	0.821	0.09	0.67	0.67	0.33	0.27	1.86	1.77	0.62
Maximum	1.16	0.9	4.76	1.44	1.34	2.12	1.88	3.78	0.937	4.46	6.63	6.21
Median i	0.926	0.635	3.5	1.07	0.741	1.37	1.04	2.03	0.43	2.32	2.25	3.25
Mean i	0.941	0.646	3.6	1.09	0.745	1.35	1.05	2.03	0.483	2.46	2.57	3.38
MAD i	0.079	0.055	0.17	0.0815	0.071	0.1	0.07	0.12	0.08	0.22	0.24	0.2
IQR i	0.175	0.109	0.415	0.185	0.135	0.17	0.135	0.235	0.22	0.45	0.42	0.495
Robust CV % i	14	13	9	13	14	9	10	9	38	14	14	11
Median f	0.926	0.63	3.42	1.07	0.751	1.37	1.04	2.05	0.428	2.32	2.23	3.19
Mean f	0.941	0.636	3.46	1.08	0.763	1.36	1.03	2.05	0.447	2.39	2.25	3.22
MAD f	0.079	0.055	0.09	0.06	0.0665	0.09	0.055	0.13	0.066	0.215	0.18	0.09
IQR f	0.175	0.105	0.178	0.115	0.13	0.163	0.113	0.198	0.141	0.44	0.363	0.175
Robust CV % f	14	12	4	8	13	9	8	7	24	14	12	4
Outliers	0	1	4	2	3	3	4	3	2	1	3	5
Stragglers	0	0	4	1	0	0	0	0	1	0	0	4

2016: Total Carbon — Dumas (6B2) % oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	30	30	30	30	29	29	29	29	29	29	29	29
Minimum	0.939	0.679	3.43	1.44	0.769	1.21	0.954	1.98	0.402	2.37	2.02	3.47
Maximum	1.33	1.05	6	1.93	1.07	1.63	1.34	2.48	0.807	4.94	3.7	4.21
Median i	1.07	0.769	4.05	1.71	0.873	1.34	1.12	2.24	0.468	2.86	2.55	3.85
Mean i	1.08	0.782	4.12	1.71	0.88	1.35	1.11	2.24	0.482	2.92	2.58	3.86
MAD i	0.035	0.029	0.2	0.065	0.02	0.03	0.03	0.05	0.013	0.14	0.1	0.06
IQR i	0.075	0.0633	0.325	0.125	0.034	0.07	0.06	0.09	0.029	0.26	0.22	0.12
Robust CV % i	5	6	6	5	3	4	4	3	5	7	6	2
Median f	1.06	0.766	4.05	1.71	0.873	1.33	1.12	2.24	0.467	2.86	2.57	3.85
Mean f	1.05	0.765	3.99	1.72	0.866	1.33	1.12	2.24	0.464	2.86	2.58	3.85
MAD f	0.03	0.026	0.18	0.06	0.011	0.03	0.02	0.035	0.011	0.14	0.1	0.055
IQR f	0.06	0.0465	0.295	0.105	0.028	0.05	0.04	0.065	0.0193	0.255	0.203	0.105
Robust CV % f	4	5	5	5	2	3	3	2	3	7	6	2
Outliers	4	3	2	3	7	6	5	4	7	2	3	5
Stragglers	1	0	1	0	2	0	2	1	0	0	0	0

2016: Total Organic Carbon - Pooled (6B1 + 6B3)% oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	25	25	25	25	23	22	22	22	20	20	20	20
Minimum	0.899	0.499	2.1	0.821	0.09	1.1	0.9	1.85	0.37	1.6	1.6	1.7
Maximum	1.86	1.28	6.2	2.06	1.26	1.66	1.49	2.48	0.668	3.06	3.8	4.7
Median i	1.06	0.7	4.12	1.2	0.811	1.36	1.1	2.19	0.456	2.71	2.53	3.83
Mean i	1.09	0.722	4.07	1.25	0.8	1.38	1.11	2.17	0.465	2.62	2.52	3.71
MAD i	0.04	0.032	0.28	0.06	0.045	0.045	0.05	0.11	0.027	0.215	0.105	0.115
IQR i	0.08	0.062	0.52	0.11	0.0955	0.085	0.105	0.238	0.05	0.43	0.18	0.235
Robust CV % i	6	7	9	7	9	5	7	8	8	12	5	5
Median f	1.06	0.69	4.12	1.2	0.811	1.35	1.09	2.19	0.453	2.71	2.53	3.89
Mean f	1.05	0.692	4.06	1.19	0.802	1.35	1.09	2.17	0.446	2.68	2.5	3.86
MAD f	0.03	0.03	0.24	0.04	0.0425	0.025	0.05	0.11	0.023	0.21	0.09	0.08
IQR f	0.07	0.052	0.505	0.07	0.0863	0.0525	0.09	0.238	0.0553	0.355	0.163	0.13
Robust CV % f	5	6	9	4	8	3	6	8	9	10	5	2
Outliers	4	4	2	5	3	4	3	0	2	1	2	3
Stragglers	0	0	0	1	0	2	0	0	0	0	0	2

2016: Total N — Pooled (7A1 + 7A2) % oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	13	13	13	13	13	13	13	13	18	18	18	18
Minimum	0.0074	0.00766	0.007	0.00791	0.07	0.06	0.08	0.169	0.05	0.17	0.17	0.244
Maximum	0.162	0.0927	0.44	0.137	0.0932	0.0878	0.1	0.238	0.075	0.238	0.25	0.339
Median i	0.073	0.067	0.35	0.091	0.08	0.074	0.0878	0.19	0.0635	0.204	0.204	0.281
Mean i	0.0769	0.0635	0.297	0.0899	0.0817	0.0742	0.0888	0.195	0.0624	0.208	0.205	0.283
MAD i	0.006	0.007	0.037	0.0085	0.006	0.0048	0.0067	0.01	0.00425	0.018	0.012	0.0115
IQR i	0.01	0.015	0.077	0.019	0.015	0.0099	0.011	0.019	0.00788	0.031	0.022	0.0205
Robust CV % i	10	17	16	15	14	10	9	7	9	11	8	5
Median f	0.073	0.067	0.35	0.09	0.0789	0.074	0.086	0.19	0.0635	0.201	0.204	0.282
Mean f	0.073	0.0682	0.353	0.0896	0.079	0.0744	0.0864	0.189	0.0624	0.205	0.203	0.284
MAD f	0.00425	0.007	0.01	0.002	0.0039	0.004	0.002	0.005	0.00425	0.0075	0.0065	0.008
IQR f	0.009	0.0142	0.0115	0.0035	0.0065	0.007	0.0034	0.007	0.00788	0.0175	0.012	0.01
Robust CV % f	9	16	2	3	6	7	3	3	9	6	4	3
Outliers	3	1	2	2	0	0	0	2	0	0	1	1
Stragglers	0	0	4	4	6	4	6	3	0	6	3	4

2016: Total N – Dumas (7A5)% oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	28	28	28	28	27	26	26	26	29	29	29	29
Minimum	0.058	0.0508	0.249	0.075	0.074	0.0661	0.0763	0.163	0.039	0.18	0.19	0.248
Maximum	0.137	0.117	0.476	0.162	0.113	0.105	0.119	0.216	0.626	0.254	2.1	0.33
Median i	0.0795	0.0717	0.389	0.102	0.084	0.0795	0.0915	0.197	0.0658	0.225	0.216	0.298
Mean i	0.0797	0.0743	0.383	0.104	0.0865	0.0822	0.0937	0.197	0.0838	0.224	0.284	0.3
MAD i	0.0065	0.0093	0.01	0.01	0.003	0.0035	0.00425	0.003	0.0048	0.012	0.014	0.008
IQR i	0.0144	0.0133	0.0213	0.0175	0.00605	0.0075	0.0086	0.00675	0.009	0.023	0.025	0.017
Robust CV % i	13	14	4	13	5	7	7	3	10	8	9	4
Median f	0.0788	0.0713	0.39	0.101	0.0829	0.0778	0.09	0.197	0.0658	0.227	0.216	0.298
Mean f	0.0751	0.0727	0.391	0.101	0.0831	0.0786	0.0913	0.197	0.0652	0.226	0.219	0.301
MAD f	0.0058	0.0065	0.008	0.0095	0.0031	0.0026	0.0025	0.0025	0.003	0.012	0.013	0.008
IQR f	0.0159	0.0123	0.013	0.0185	0.00565	0.0053	0.005	0.0045	0.0058	0.0233	0.0255	0.015
Robust CV % f	15	13	2	14	5	5	4	2	7	8	9	4
Outliers	3	1	7	2	4	6	4	6	4	1	1	2
Stragglers	0	4	0	0	0	1	1	0	0	0	0	0

2016: Water Soluble Nitrate N— Pooled (7B1 +7B2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	16	16	16	16	19	16	17	18	17	16	18	16
Minimum	12.1	0.759	12	0.826	9.34	0.05	1.21	2	0.5	0.05	1.15	0.018
Maximum	18.3	11	67.5	12	16	149	42	38.1	1850	472	309	229
Median i	15	2.54	55.6	2.8	11.4	0.51	2	34.7	0.698	0.25	6.02	0.342
Mean i	15.1	3.09	52.5	3.38	11.6	10.2	4.57	32.1	110	30	23	14.8
MAD i	1.2	0.385	3	0.28	0.6	0.35	0.4	2.2	0.108	0.195	0.835	0.237
IQR i	2.45	0.563	7.6	0.525	1.3	0.896	1.31	4.73	0.573	0.611	2.41	0.473
Robust CV % i	12	16	10	14	8	130	49	10	61	181	30	102
Median f	14.9	2.51	56.6	2.8	11.1	0.444	2	35	0.625	0.1	5.98	0.2
Mean f	14.9	2.48	55.2	2.77	11.2	0.408	1.92	35.1	0.655	0.173	5.73	0.277
MAD f	1	0.3	2.1	0.23	0.9	0.191	0.26	1.7	0.0695	0.05	0.26	0.15
IQR f	1.9	0.42	5.1	0.455	1.2	0.359	0.39	2.6	0.124	0.185	0.64	0.385
Robust CV % f	9	12	7	12	8	60	14	6	15	137	8	143
Outliers	0	3	3	4	2	4	4	3	5	3	2	2
Stragglers	1	0	0	0	0	0	0	0	0	2	5	1

2016: KCl Extractable Nitrate N — autocolour (7C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	28	28	28	27	25	24	25	25	28	27	27	27
Minimum	12.6	2.07	43.4	0.282	1.16	0.001	0.17	0.54	0.131	0.01	4.67	0.01
Maximum	19	4.38	66.9	4.55	16	43.5	4.4	45.2	4.55	3.57	10.5	3.53
Median i	15.5	2.73	58.1	2.94	11.1	0.51	2.1	34.6	0.697	0.27	6.3	0.3
Mean i	15.5	2.86	57.6	2.89	10.8	2.32	2.12	33.3	0.936	0.441	6.42	0.461
MAD i	0.55	0.29	2.55	0.43	0.7	0.288	0.42	1.5	0.176	0.17	0.37	0.2
IQR i	1.18	0.568	4.38	0.785	1.3	0.622	0.74	3.4	0.363	0.339	0.715	0.355
Robust CV % i	6	15	6	20	9	90	26	7	39	93	8	88
Median f	15.3	2.73	58.2	2.9	11.1	0.45	2.1	34.5	0.657	0.246	6.3	0.294
Mean f	15.4	2.71	58.2	2.87	11.2	0.406	2.1	34.6	0.646	0.265	6.29	0.286
MAD f	0.7	0.24	1.9	0.39	0.5	0.296	0.32	1.2	0.0615	0.147	0.3	0.156
IQR f	1.1	0.5	3.4	0.693	0.8	0.523	0.64	2.05	0.122	0.295	0.565	0.29
Robust CV % f	5	14	4	18	5	86	23	4	14	89	7	73
Outliers	3	3	3	2	3	2	4	5	5	3	4	2
Stragglers	0	0	0	1	5	0	2	4	7	0	0	0

2016: KCl Ext. Ammonium N — autocolour (7C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	32	32	32	31	30	30	29	29	32	32	32	32
Minimum	1.45	1.14	12.1	1.37	0.622	3.8	0.605	2.6	1.39	3.23	1.89	9.08
Maximum	15	12.2	59.1	13	10.5	46.7	11	36.8	7.69	50	24	68.6
Median i	8.98	5.59	47.8	6.73	5.89	38.4	6	27.4	5.46	29.8	19.6	57.6
Mean i	9.19	5.98	46.4	6.96	5.95	36.3	6	26.4	5.56	29.7	18.9	54.9
MAD i	0.615	0.44	3.05	1.07	0.585	2.45	1.1	1.4	0.52	2.6	1.45	4.4
IQR i	1.44	0.813	5.55	1.93	1.25	4.13	2.03	3	1	4.28	2.43	10.3
Robust CV % i	12	11	9	21	16	8	25	8	14	11	9	13
Median f	8.85	5.51	48.9	6.53	5.8	38.6	6	27.4	5.4	29.8	19.6	58.4
Mean f	8.84	5.43	48.5	6.66	5.76	38.4	6.04	27.5	5.45	30	19.5	57.7
MAD f	0.35	0.335	3.1	0.78	0.5	2	0.93	0.8	0.41	1.9	1.2	3.8
IQR f	0.705	0.615	5.2	1.28	1.04	3.45	1.9	1.65	0.765	3.88	2.3	8
Robust CV % f	6	8	8	15	13	7	23	4	11	10	9	10
Outliers	6	5	4	5	6	4	4	3	3	3	1	3
Stragglers	4	1	0	1	1	0	0	3	2	1	2	0

2016: Total P - Pooled % oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	24	24	24	24	23	22	22	22	28	28	28	27
Minimum	0.0186	0.0108	0.0731	0.0102	0.019	0.0258	0.0549	0.0408	0.00293	0.011	0.00424	0.00429
Maximum	0.029	0.026	0.22	0.024	0.0454	0.0506	0.113	0.091	0.273	0.22	0.498	0.19
Median i	0.0224	0.0183	0.124	0.0185	0.0259	0.0357	0.0956	0.049	0.0372	0.157	0.0465	0.135
Mean i	0.0227	0.0186	0.127	0.0178	0.0272	0.0366	0.0938	0.0525	0.0446	0.148	0.0641	0.131
MAD i	0.0022	0.00205	0.0065	0.00195	0.0022	0.00235	0.01	0.0033	0.00215	0.019	0.00405	0.01
IQR i	0.00413	0.00393	0.0145	0.00393	0.00435	0.00465	0.0188	0.00658	0.00348	0.0398	0.00753	0.019
Robust CV % i	14	16	9	16	12	10	15	10	7	19	12	10
Median f	0.0224	0.0178	0.124	0.019	0.025	0.0354	0.0956	0.0489	0.037	0.162	0.0455	0.137
Mean f	0.0227	0.018	0.124	0.0184	0.0255	0.0359	0.0956	0.0492	0.0365	0.157	0.0459	0.135
MAD f	0.0022	0.0018	0.004	0.00195	0.002	0.0021	0.0084	0.0026	0.001	0.0125	0.00395	0.0085
IQR f	0.00413	0.0035	0.007	0.00353	0.0042	0.0043	0.0163	0.00515	0.0029	0.0265	0.0072	0.0155
Robust CV % f	14	15	4	14	12	9	13	8	6	12	12	8
Outliers	0	2	6	2	2	3	1	3	5	2	4	2
Stragglers	0	2	2	0	0	0	0	0	3	2	0	1

2016: Colwell Extractable P — Pooled (9B1 + 9B2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	30	30	30	30	30	29	29	29	29	30	30	30
Minimum	6.49	12.8	34	0.01	11	34	32.8	17.2	0.301	50.4	17.6	48.7
Maximum	30.3	21	108	9.11	30.6	67.5	68.2	60.7	8.5	222	57.2	583
Median i	18.4	17.9	53.7	4.72	24.2	51.5	45.5	35.2	4.7	168	46.1	150
Mean i	18.8	17.6	55.2	5.01	23.8	51.5	46.4	35.6	4.31	161	44.9	157
MAD i	1.85	0.954	3.65	1.34	3.05	4.5	5	4.8	1.2	11.5	3.7	15.5
IQR i	3.38	1.89	7.27	2.45	5.08	8.7	10.8	9.5	2.41	26.8	6.88	30.5
Robust CV % i	14	8	10	38	16	13	18	20	38	12	11	15
Median f	18.4	18.2	53.7	4.78	24.4	51.5	45.2	35.2	4.83	169	46.4	150
Mean f	18.5	18.2	54.1	5.21	24.2	51	44.9	35.3	4.75	168	46.6	146
MAD f	1.56	1	2.85	1.18	3.1	3.6	4.7	4.2	1.13	10	3.35	14.5
IQR f	2.98	1.77	5.62	2.26	4.9	6.78	7.15	8.65	1.95	19	6.88	29.5
Robust CV % f	12	7	8	35	15	10	12	18	30	8	11	15
Outliers	3	4	5	1	1	2	2	2	3	4	2	2
Stragglers	0	0	1	2	0	1	0	0	0	1	0	0

2016: Olsen Extractable P — Pooled (9C1 + 9C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	24	24	24	24	25	24	24	24	27	28	28	28
Minimum	5.11	4.35	6.92	0.01	5.1	6.74	1.27	5.9	0.339	12.1	8.42	15.6
Maximum	15.4	11.3	22.9	3.34	21.1	31.8	35.6	38.3	7.79	87	39	77
Median i	7.16	7.42	12.4	1.45	9.92	17.2	18.4	12	1.51	45.1	17.5	43.1
Mean i	7.81	7.56	12.9	1.54	10.3	17.3	18.7	13	1.71	46.4	19	44.5
MAD i	0.98	0.745	1.46	0.39	1.38	2.55	2.55	1.4	0.49	4.55	1.15	3.35
IQR i	2.19	1.39	3.08	0.72	2.52	4.5	6.18	2.78	0.925	8.78	1.75	6.58
Robust CV % i	23	14	19	37	19	19	25	17	45	14	7	11
Median f	7.02	7.4	12	1.41	9.92	17.3	18.5	12	1.5	44.7	17.4	42.6
Mean f	7.04	7.39	12.5	1.47	10	17.3	19.2	11.9	1.39	43.9	17.3	42.6
MAD f	0.821	0.6	1.3	0.32	1.38	0.8	2.5	1	0.42	3.6	0.65	2.4
IQR f	1.6	1.26	2.6	0.61	2.52	1.55	5.3	2.15	0.84	7.5	1	4.65
Robust CV % f	17	13	16	32	19	7	21	13	42	12	4	8
Outliers	2	3	3	3	2	4	3	3	2	5	7	6
Stragglers	1	0	0	0	0	5	0	2	0	0	1	0

2016: Bray-1 Extractable P — Pooled (9E1 + 9E2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	15	15	15	14	16	15	15	15	19	19	19	19
Minimum	8.33	3.08	2.72	0.1	6.2	12.8	11.7	14.4	0.1	16.5	10.6	56.1
Maximum	41.7	35.4	32.5	19.5	15.5	54.4	45.3	37.1	116	1390	401	1220
Median i	13	5.88	5	0.398	10.6	42.8	18.9	23	1.65	23.4	15	76
Mean i	15.1	9.11	8.83	2.11	10.7	40.5	20	24	13.1	99.5	36.2	142
MAD i	1	1.19	1.39	0.255	1.3	3.9	2.1	3	0.37	4.4	2.8	7.9
IQR i	1.76	2.5	3.12	1.13	2.27	7.7	4	5.45	0.73	11.6	5.55	15.6
Robust CV % i	10	31	46	211	16	13	16	18	33	37	27	15
Median f	13	5.8	4.62	0.23	10.6	42.9	18.5	23	1.57	22.2	14.7	75.3
Mean f	12.9	6.02	4.51	0.285	10.7	42.5	18.1	23.1	1.57	23.2	14.7	75.4
MAD f	0.74	1	0.88	0.08	0.995	3.65	1.35	2.65	0.27	2.95	2.5	7.1
IQR f	1.37	1.99	1.59	0.231	1.77	6.68	3.08	5	0.49	6.05	3.7	12.2
Robust CV % f	8	25	26	74	12	12	12	16	23	20	19	12
Outliers	3	2	3	4	1	1	1	1	4	3	2	3
Stragglers	0	0	1	1	1	0	2	0	0	0	0	0

2016: Acid Extractable P — Pooled (9G1 + 9G2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	11	11	11	11	10	10	10	10	12	12	12	12
Minimum	15.3	14.5	64.2	0.375	28.6	56.5	254	38.9	114	183	33.5	241
Maximum	45.1	35.1	150	13.3	42.3	69.3	563	58	152	244	67	328
Median i	25	24	93.2	2.88	34.9	65.1	390	47.7	134	212	45.2	295
Mean i	25.9	24.2	96.1	4.51	34.5	64	391	47	134	213	46	291
MAD i	3.9	4.32	19.6	1.93	3.9	2.05	38	4.6	6	15.5	3.55	20.5
IQR i	6.43	7.77	26.5	4.53	7.2	3.3	67	5.55	10	29.8	5.1	41.3
Robust CV % i	19	24	21	117	15	4	13	9	6	10	8	10
Median f	24.7	24	93.2	2.79	34.9	65.1	384	47.7	134	212	45.2	295
Mean f	24	24.2	96.1	3.63	34.5	64	372	47	134	213	45.3	291
MAD f	3.25	4.32	19.6	1.45	3.9	2.05	33	4.6	6	15.5	1.4	20.5
IQR f	5.97	7.77	26.5	3.52	7.2	3.3	75	5.55	10	29.8	2.3	41.3
Robust CV % f	18	24	21	93	15	4	14	9	6	10	4	10
Outliers	1	0	0	1	0	0	1	0	0	0	1	0
Stragglers	0	0	0	0	0	0	0	0	0	0	3	0

2016: Phosphorus buffer index - Colwell (9I2a + 9I2b + 9I2c) L/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	22	22	22	22	21	21	21	21	21	21	21	21
Minimum	44	120	639	231	25.2	166	75.9	81.6	36	171	112	75
Maximum	78	144	1180	283	80	266	112	118	221	768	549	322
Median i	53.4	130	899	251	70	222	94.3	96	48	594	142	251
Mean i	53.7	130	907	252	67.3	217	95.1	98	56.4	588	165	242
MAD i	3.65	4.4	73	8	5	22	8.6	6.2	3	44	7	20
IQR i	7.7	7.5	144	15	9.5	39	15.5	13.3	4.9	83	16	34
Robust CV % i	11	4	12	4	10	13	12	10	8	10	8	10
Median f	53.3	130	899	250	70	222	94.3	95.8	48	591	140	251
Mean f	52.5	130	907	250	69.5	217	95.1	97	48.3	593	142	247
MAD f	3.7	4.4	70.7	7.3	4.5	22	8.6	6.05	1.9	34.5	5	13
IQR f	7.5	7.5	139	15	8.88	39	15.5	11.5	3.45	75	10	31
Robust CV % f	10	4	11	4	9	13	12	9	5	9	5	9
Outliers	1	0	2	1	1	0	0	1	4	2	3	2
Stragglers	0	0	0	0	0	0	0	0	2	1	1	0

2016: Phosphorus buffer index - Unadj (9I4a + 9I4b + 9I4c) L/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	15	15	15	15	14	14	14	14	13	13	13	13
Minimum	45	116	648	239	56.7	169	76.4	80.7	5.4	29.2	13.9	17.3
Maximum	61.6	130	1100	281	76	244	104	107	215	651	514	270
Median i	51.5	127	865	252	66.4	211	86.3	89.9	48	508	131	204
Mean i	51.1	125	873	253	66.6	210	87.7	91.6	56.5	459	152	183
MAD i	2.48	3	54	5.98	4.2	16.5	4.55	4.65	2.1	31	9	13
IQR i	6.45	6	103	13.3	7.2	29.3	8.55	10.3	4.2	51	16	26
Robust CV % i	9	4	9	4	8	10	7	8	6	7	9	9
Median f	50.8	127	865	252	66.4	211	86	89.9	48	508	132	207
Mean f	50.3	125	855	251	66.6	210	86.5	91.6	47.6	505	134	205
MAD f	3.24	3	44.8	5.5	4.2	16.5	4.8	4.65	1.3	19	6.5	9
IQR f	5.93	6	78.4	13.3	7.2	29.3	8.8	10.3	2.28	29	13.3	16.8
Robust CV % f	9	4	7	4	8	10	8	8	4	4	7	6
Outliers	1	0	3	1	0	0	1	0	3	3	2	3
Stragglers	0	0	0	0	0	0	0	0	0	1	1	0

2016: Phosphate Extractable S – Pooled (10B1 + 10B2 + 10B3) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	11	11	11	11	10	10	10	10	10	10	10	10
Minimum	10.5	9.92	55.5	10	4.9	5370	6.83	3	4.93	29.4	9.13	6.6
Maximum	18	20.5	104	20	16	8810	31.7	36.6	23	80.8	24.8	54.4
Median i	13.9	10.8	93.6	17.9	11.9	6900	11.3	34.2	8.93	72.9	22.2	45.5
Mean i	13.9	12	90.3	17.1	11.6	7040	13.6	29.5	9.83	70.1	21.1	41.4
MAD i	0.8	0.6	3.6	1.6	1.2	275	1.35	2.1	1.12	2.65	1.45	3.85
IQR i	1.3	2.15	5.95	2.4	1.95	600	2.4	5.7	2.03	5.3	2.7	6.23
Robust CV % i	7	15	5	10	12	6	16	12	17	5	9	10
Median f	13.9	10.6	94.6	18.1	11.9	6900	10.7	34.8	8.8	73.8	22.3	46.6
Mean f	13.8	10.5	96.1	17.9	12.3	7020	10.5	34	8.36	74.6	22.4	48
MAD f	0.6	0.35	1.6	1.3	1.1	190	1.2	1.15	1.04	2.1	1.4	2.6
IQR f	1	0.65	5.7	2.2	1.2	400	1.73	2.03	1.65	5.6	2.8	6.28
Robust CV % f	5	5	4	9	7	4	12	4	14	6	9	10
Outliers	2	3	2	1	1	2	2	2	1	1	1	2
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2016: KCl_{40} Extractable S (10D1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	18	18	18	18	16	16	16	16	20	20	20	19
Minimum	10.4	6.1	34.9	7.4	2.4	1320	1.89	6.44	3.14	31.1	14.9	27.9
Maximum	21.4	14.4	93.9	15.8	105	8820	30	39.6	18.3	73.9	34.3	49.3
Median i	13	8.65	46.7	11.8	9.27	6730	8.39	24.9	7.25	43.3	17.5	33.9
Mean i	13.6	9.03	51.6	11.9	16.8	6370	9.7	24.1	7.8	44.7	18.1	34.7
MAD i	1.1	1.09	4.6	1.2	0.605	300	2.72	2.75	0.655	6.25	1.55	4.3
IQR i	2.08	2.05	10.6	2.35	2.63	1050	5.46	5.65	1.33	11.9	3.13	7.95
Robust CV % i	12	18	17	15	21	12	48	17	14	20	13	17
Median f	12.7	8.42	45.2	11.8	9	6860	7.86	24.9	7.05	42.7	17.4	33.9
Mean f	12.5	8.47	45.3	11.9	8.98	6790	7.87	24.3	7.17	43.2	17.3	34.7
MAD f	1	1.02	3.75	1.2	0.115	130	2.22	2.55	0.445	5.9	1.6	4.3
IQR f	1.6	1.95	6.7	2.35	0.22	280	4.62	5.13	0.868	11.1	2.65	7.95
Robust CV % f	9	17	11	15	2	3	44	15	9	19	11	17
Outliers	2	2	4	0	5	3	1	2	3	1	1	0
Stragglers	1	0	0	0	3	4	1	0	1	0	0	0

2016: DTPA Extractable Fe (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	26	26	26	26	25	24	24	24	30	30	30	30
Minimum	39.7	23.9	27.9	7.73	15.7	17	17.4	19	6.18	4.22	9.85	20.5
Maximum	121	46.9	55.4	25.9	29	255	42.7	248	32.8	59.8	56.6	115
Median i	56.1	34.1	36.9	15.2	24.1	186	31.7	75.9	10.7	7	31.9	41.8
Mean i	58.9	33.6	38.2	15.1	23.7	175	30.5	93.6	11.8	10.7	32.9	47.5
MAD i	8.25	4.75	3.3	2.25	3.6	17	3.5	17.8	1.36	1.38	4.3	11.1
IQR i	14.4	9	8.35	4.18	5.9	35	7.83	43.6	2.9	2.75	8.28	21.7
Robust CV % i	19	20	17	20	18	14	18	43	20	29	19	38
Median f	55	34.1	36.1	15.2	24.1	188	32.4	71.1	10.6	6.71	31.8	37.6
Mean f	53.8	33.6	36.5	15	23.7	184	31.5	75.9	10.5	6.9	30.9	38.8
MAD f	6.6	4.75	2.5	2.15	3.6	7.5	2.3	10.7	1.1	1.11	3.6	11.2
IQR f	12.9	9	5.9	3.73	5.9	19.5	5.2	22.9	2.1	2.06	6.4	21.1
Robust CV % f	17	20	12	18	18	8	12	24	15	23	15	42
Outliers	2	0	2	1	0	3	1	3	3	5	4	4
Stragglers	1	0	1	1	0	3	3	3	2	0	1	0

2016: DTPA Extractable Cu (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	26	26	26	26	25	24	24	24	30	30	30	30
Minimum	0.587	1.4	0.63	0.907	1.18	0.637	0.948	1.02	1.1	1.02	0.973	0.898
Maximum	1.1	2.3	14.3	14.6	18.4	2	3.6	5.6	2.74	2.74	2.71	2.32
Median i	0.74	1.69	0.882	1.07	1.56	0.844	1.24	2.03	1.89	1.44	1.72	1.36
Mean i	0.754	1.71	1.41	1.6	2.31	0.971	1.32	2.13	1.89	1.57	1.71	1.41
MAD i	0.0565	0.09	0.076	0.0825	0.13	0.079	0.085	0.175	0.09	0.14	0.12	0.1
IQR i	0.096	0.173	0.189	0.15	0.28	0.315	0.153	0.383	0.178	0.365	0.245	0.21
Robust CV % i	10	8	16	10	13	28	9	14	7	19	11	11
Median f	0.73	1.67	0.87	1.05	1.55	0.8	1.23	2.02	1.89	1.39	1.73	1.35
Mean f	0.73	1.66	0.879	1.06	1.54	0.797	1.22	2	1.88	1.37	1.74	1.35
MAD f	0.049	0.09	0.0635	0.085	0.11	0.0355	0.07	0.18	0.07	0.09	0.105	0.05
IQR f	0.0848	0.173	0.145	0.154	0.148	0.067	0.14	0.35	0.13	0.158	0.205	0.09
Robust CV % f	9	8	12	11	7	6	8	13	5	8	9	5
Outliers	2	2	1	2	2	6	1	2	6	4	3	6
Stragglers	0	0	1	0	1	2	2	1	2	4	1	3

2016:DTPA Extractable Mn (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	26	26	26	26	25	24	24	24	30	30	30	30
Minimum	108	14.1	72.3	28	7	3	5	7	9.22	227	65.3	210
Maximum	148	28.2	101	50.6	35.1	66	76.7	407	88.6	566	364	591
Median i	126	16.7	88.7	36.7	28.6	54.6	53	303	23.7	337	151	444
Mean i	127	17.6	88.5	37.3	27.4	52.4	52.5	287	25.9	353	158	434
MAD i	6	0.9	4.5	2.45	2.3	3.3	4.6	34.5	2.75	27	8	27
IQR i	13	1.83	8.63	4.68	3.9	7.9	9.1	62	5.48	42.8	15.8	57
Robust CV % i	8	8	7	9	10	11	13	15	17	9	8	10
Median f	126	16.4	88.7	36	28.6	54.6	53	309	23.5	335	150	444
Mean f	125	16.4	89.2	36.2	28.2	55.5	53.6	304	23.9	336	149	438
MAD f	6	0.6	4.3	2.3	2.05	3.1	4.5	28.5	2.5	15	6	22
IQR f	9	1.05	8	4.3	4.03	7.68	8.78	58.5	5.15	28.3	10	44.3
Robust CV % f	5	5	7	9	10	10	12	14	16	6	5	7
Outliers	2	3	1	4	1	3	2	1	3	7	8	4
Stragglers	0	3	0	0	0	1	0	1	0	3	1	2

2016: DTPA Extractable Zn (12A1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	26	26	26	26	25	24	24	24	30	30	30	30
Minimum	0.415	0.282	2.26	0.166	1.16	1.65	0.216	0.3	0.37	0.419	0.705	1.76
Maximum	0.648	0.957	3.81	0.534	5.2	22.7	1.5	1.06	10.7	1.08	1.15	3.74
Median i	0.53	0.435	2.84	0.278	2.28	14.9	0.6	0.84	1.03	0.61	0.858	2.72
Mean i	0.538	0.462	2.84	0.289	2.32	14	0.607	0.813	1.35	0.665	0.862	2.77
MAD i	0.04	0.035	0.16	0.04	0.09	1.1	0.056	0.079	0.056	0.0615	0.053	0.18
IQR i	0.0883	0.0793	0.35	0.0805	0.16	2.4	0.101	0.152	0.107	0.139	0.109	0.305
Robust CV % i	12	14	9	22	5	12	12	13	8	17	9	8
Median f	0.53	0.43	2.84	0.27	2.29	15	0.605	0.882	1.02	0.607	0.848	2.72
Mean f	0.538	0.438	2.84	0.279	2.28	14.7	0.608	0.873	1.02	0.602	0.845	2.75
MAD f	0.04	0.023	0.12	0.045	0.05	0.7	0.0405	0.072	0.04	0.045	0.0515	0.15
IQR f	0.0883	0.06	0.23	0.078	0.105	1.23	0.066	0.117	0.0805	0.0825	0.101	0.22
Robust CV % f	12	10	6	21	3	6	8	10	6	10	9	6
Outliers	0	6	4	1	8	4	3	3	4	5	2	4
Stragglers	0	1	3	0	2	2	1	0	2	2	0	1

2016: CaCl2 Extractable B (12C1 + 12C2) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	18	18	18	18	17	17	17	17	21	21	21	21
Minimum	0.306	1.25	0.32	0.739	0.897	0.275	0.3	0.324	0.033	1.08	0.294	0.5
Maximum	0.831	3.15	1.18	3.47	2.5	5.6	0.717	0.767	1.34	3.23	1.35	2.09
Median i	0.522	2.01	0.663	1.78	1.5	3	0.41	0.5	0.123	1.9	0.733	1.53
Mean i	0.536	2.04	0.673	1.77	1.54	3.12	0.447	0.527	0.184	2	0.809	1.57
MAD i	0.0545	0.38	0.113	0.33	0.22	0.85	0.057	0.065	0.012	0.31	0.129	0.22
IQR i	0.111	0.75	0.21	0.608	0.42	1.31	0.102	0.116	0.024	0.69	0.302	0.45
Robust CV % i	16	28	23	25	21	32	18	17	14	27	31	22
Median f	0.522	2.01	0.644	1.78	1.5	3	0.41	0.5	0.121	1.86	0.733	1.55
Mean f	0.532	2.04	0.643	1.67	1.47	3.12	0.43	0.495	0.122	1.94	0.807	1.62
MAD f	0.05	0.38	0.12	0.31	0.21	0.85	0.0435	0.06	0.008	0.295	0.098	0.2
IQR f	0.0938	0.75	0.224	0.53	0.305	1.31	0.0885	0.109	0.017	0.565	0.285	0.443
Robust CV % f	13	28	26	22	15	32	16	16	10	23	29	21
Outliers	2	0	1	1	1	0	1	2	6	1	1	1
Stragglers	0	0	0	0	0	0	0	0	2	0	1	0

2016: Exchangeable Ca — 1M NH_4Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	19	19	19	19	19	18	18	18	21	21	21	21
Minimum	2.78	17.2	5.49	6.7	10.1	2.8	20.5	2.98	6.9	6.7	21	5.1
Maximum	4.3	23.8	45	50.2	14.2	9.97	29.2	3.82	9.5	10.4	32	8.1
Median i	3.6	21.5	7.05	43	12.8	9.26	25.2	3.44	8.68	8.91	28	7.01
Mean i	3.59	21.2	9.02	40	12.7	8.45	25.1	3.43	8.43	8.86	27.3	6.94
MAD i	0.25	0.4	0.34	2.5	0.5	0.395	1.15	0.16	0.36	0.6	1.8	0.49
IQR i	0.48	1.3	0.59	5	1.1	1.13	2.1	0.333	1.11	1.1	3.1	0.9
Robust CV % i	10	4	6	9	6	9	6	7	9	9	8	10
Median f	3.6	21.5	7.05	44	13	9.32	25.3	3.46	8.77	8.95	28.1	7.07
Mean f	3.59	21.3	7.11	43.8	13	9.22	25.4	3.45	8.64	8.96	27.6	7.12
MAD f	0.25	0.2	0.31	1.8	0.3	0.24	1	0.11	0.27	0.55	1.65	0.44
IQR f	0.48	0.3	0.46	3.15	0.6	0.455	1.7	0.2	0.58	1.09	3.05	0.815
Robust CV % f	10	1	5	5	3	4	5	4	5	9	8	9
Outliers	0	6	2	3	2	3	1	0	3	1	1	1
Stragglers	0	0	0	0	0	0	0	3	0	0	0	1

2016: Exchangeable K — 1M NH_4Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	19	19	18	19	19	17	17	18	20	21	21	21
Minimum	0.286	1.33	0.0142	0.009	0.766	0.052	0.271	0.892	0.0837	0.92	0.81	0.97
Maximum	0.708	2.5	0.308	0.78	10.2	0.313	3.38	13.9	0.23	1.78	1.58	1.77
Median i	0.63	1.72	0.225	0.641	1.06	0.074	0.38	1.4	0.104	1.45	1.3	1.52
Mean i	0.609	1.71	0.218	0.593	1.51	0.0979	0.55	2.02	0.109	1.41	1.26	1.46
MAD i	0.03	0.05	0.015	0.041	0.04	0.014	0.02	0.055	0.007	0.14	0.1	0.08
IQR i	0.06	0.115	0.0285	0.0815	0.09	0.029	0.04	0.16	0.0125	0.32	0.18	0.25
Robust CV % i	7	5	9	9	6	29	8	8	9	16	10	12
Median f	0.632	1.72	0.225	0.67	1.06	0.064	0.378	1.4	0.101	1.47	1.32	1.55
Mean f	0.634	1.72	0.229	0.661	1.05	0.0695	0.373	1.39	0.103	1.44	1.31	1.53
MAD f	0.028	0.04	0.013	0.029	0.04	0.006	0.018	0.045	0.009	0.12	0.08	0.06
IQR f	0.046	0.06	0.022	0.049	0.0725	0.017	0.026	0.0775	0.0141	0.263	0.155	0.145
Robust CV % f	5	3	7	5	5	20	5	4	10	13	9	7
Outliers	2	4	3	3	3	3	3	4	1	1	2	3
Stragglers	0	0	0	0	0	1	0	0	0	0	0	0

2016: Exchangeable Mg — 1M NH_4Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	19	19	19	19	19	18	18	18	21	21	21	21
Minimum	0.96	9.33	0.54	9.24	5.07	1.1	9	0.531	0.94	1.5	6.7	1.9
Maximum	1.4	13.1	0.9	12.7	6.75	22	11.4	0.881	1.63	2.35	9.62	2.9
Median i	1.13	10.6	0.614	10	5.86	18.7	10.5	0.7	1.17	1.82	8.57	2.29
Mean i	1.15	10.7	0.645	10.2	5.9	16.9	10.4	0.7	1.19	1.82	8.59	2.3
MAD i	0.07	0.4	0.048	0.2	0.17	1	0.4	0.04	0.06	0.12	0.27	0.09
IQR i	0.12	0.7	0.0725	0.38	0.33	1.78	0.75	0.0735	0.1	0.2	0.5	0.18
Robust CV % i	8	5	9	3	4	7	5	8	6	8	4	6
Median f	1.12	10.4	0.609	9.93	5.86	19	10.5	0.7	1.17	1.82	8.56	2.29
Mean f	1.14	10.5	0.62	9.88	5.9	18.8	10.4	0.699	1.18	1.8	8.58	2.3
MAD f	0.055	0.3	0.031	0.15	0.15	0.75	0.4	0.035	0.04	0.1	0.245	0.09
IQR f	0.095	0.6	0.05	0.245	0.28	1.33	0.75	0.0585	0.075	0.2	0.433	0.158
Robust CV % f	6	4	6	2	4	5	5	6	5	8	4	5
Outliers	1	2	2	5	2	2	0	2	2	1	3	3
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2016: Exchangeable Na — 1M NH_4Cl extract (15A1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	18	19	18	19	18	18	17	17	19	20	20	20
Minimum	0.26	0.96	0.1	0.59	0.129	0.772	0.105	0.005	0.029	0.049	0.032	0.108
Maximum	0.5	1.55	0.4	1.19	2.04	192	1.36	1.28	1.32	1.4	1.37	1.43
Median i	0.344	1.31	0.155	0.84	0.236	20.7	0.168	0.041	0.0487	0.137	0.108	0.199
Mean i	0.366	1.32	0.193	0.868	0.404	27.5	0.328	0.126	0.129	0.206	0.206	0.265
MAD i	0.03	0.05	0.022	0.08	0.0135	1.05	0.047	0.03	0.0157	0.018	0.0239	0.029
IQR i	0.0545	0.11	0.0925	0.177	0.0205	3.05	0.095	0.064	0.047	0.038	0.108	0.0578
Robust CV % i	12	6	44	16	6	11	42	116	72	21	74	22
Median f	0.34	1.3	0.15	0.835	0.232	21	0.16	0.03	0.04	0.132	0.096	0.191
Mean f	0.343	1.3	0.147	0.85	0.23	20.5	0.172	0.0383	0.0406	0.133	0.0962	0.192
MAD f	0.016	0.01	0.015	0.0585	0.0085	0.45	0.02	0.011	0.0045	0.012	0.0119	0.027
IQR f	0.0335	0.01	0.024	0.135	0.0188	0.775	0.043	0.025	0.00603	0.021	0.0234	0.05
Robust CV % f	7	1	12	12	6	3	20	62	11	12	18	19
Outliers	3	6	5	1	4	4	3	1	4	5	5	1
Stragglers	0	0	0	0	0	0	1	3	3	0	1	2

2016: Exchangeable Ca — 1M NH_4OAc extract (15D3) cmol+/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	21	21	21	21	23	23	23	23	24	24	24	24
Minimum	2.81	15.5	5.87	9.3	9.67	7.32	21.4	3.02	3.66	3.33	11.6	2.57
Maximum	4.56	22.8	8.28	79.8	14.7	11	30.3	9.44	56.8	56.2	190	46.2
Median i	3.51	20.5	6.63	42	12.5	8.85	25.5	3.5	8.46	8.8	27.4	6.94
Mean i	3.49	20.1	6.73	42.4	12.6	8.92	25.8	3.77	10.2	10.5	33.2	8.29
MAD i	0.16	1.1	0.25	4.5	0.5	0.44	1.4	0.14	0.375	0.435	2.05	0.285
IQR i	0.32	2	0.56	6.2	1.2	0.81	2.45	0.335	0.745	0.893	3.78	0.553
Robust CV % i	7	7	6	11	7	7	7	7	7	8	10	6
Median f	3.51	20.5	6.61	42	12.4	8.81	25.4	3.43	8.45	8.78	27.4	6.96
Mean f	3.47	20.3	6.59	41.6	12.5	8.83	25.5	3.5	8.43	8.83	27.8	6.97
MAD f	0.15	0.5	0.2	1.7	0.1	0.345	0.5	0.1	0.3	0.42	1.5	0.22
IQR f	0.29	0.8	0.34	3.55	0.2	0.673	1	0.195	0.49	0.705	3	0.41
Robust CV % f	6	3	4	6	1	6	3	4	4	6	8	4
Outliers	2	1	2	3	4	1	0	1	4	4	4	6
Stragglers	0	7	4	3	6	2	8	3	1	1	1	1

2016: Exchangeable K — 1M NH_4OAc extract (15D3) cmol+/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	26	26	26	26	27	27	27	27	27	27	27	27
Minimum	0.07	0.22	0.091	0.057	0.42	0.02	0.11	0.33	0.05	0.52	0.34	0.67
Maximum	0.7	1.81	0.28	0.86	2.26	0.65	0.77	3.65	0.867	7.53	7.08	8.27
Median i	0.612	1.6	0.217	0.632	1.03	0.075	0.365	1.37	0.102	1.38	1.22	1.45
Mean i	0.568	1.49	0.204	0.588	1.05	0.117	0.376	1.42	0.151	1.55	1.39	1.64
MAD i	0.0305	0.06	0.0155	0.036	0.03	0.0107	0.014	0.05	0.008	0.08	0.07	0.07
IQR i	0.0585	0.113	0.0225	0.076	0.052	0.022	0.0245	0.1	0.018	0.14	0.11	0.14
Robust CV % i	7	5	8	9	4	22	5	5	13	8	7	7
Median f	0.618	1.61	0.219	0.632	1.03	0.071	0.365	1.38	0.102	1.38	1.23	1.47
Mean f	0.622	1.61	0.218	0.624	1.03	0.0734	0.365	1.37	0.0998	1.36	1.22	1.45
MAD f	0.009	0.03	0.0125	0.026	0.01	0.0079	0.006	0.025	0.0052	0.04	0.02	0.05
IQR f	0.0305	0.0525	0.019	0.0633	0.0225	0.0159	0.0123	0.0425	0.0111	0.1	0.035	0.1
Robust CV % f	4	2	6	7	2	17	2	2	8	5	2	5
Outliers	5	5	5	4	5	4	5	6	8	4	5	4
Stragglers	6	5	1	2	6	1	4	5	0	0	6	2

2016: Exchangeable Mg — 1M NH_4OAc extract (15D3) cmol+/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	21	21	21	21	23	23	23	23	24	24	24	24
Minimum	0.848	8.39	0.469	7.73	4.71	12.1	2.76	0.565	0.47	0.58	3.47	0.81
Maximum	4.77	31.3	9.96	61.8	6.77	21.6	11.2	1.16	4.11	4.78	11.7	5.86
Median i	1.07	10.1	0.577	9.8	5.74	18.5	10	0.687	1.13	1.72	8.21	2.18
Mean i	1.26	11	1.03	12.2	5.75	18.1	9.72	0.715	1.23	1.78	7.98	2.24
MAD i	0.08	0.4	0.036	0.57	0.15	0.6	0.3	0.03	0.05	0.04	0.15	0.11
IQR i	0.12	0.81	0.072	1.12	0.265	1.15	0.465	0.064	0.095	0.0775	0.323	0.215
Robust CV % i	8	6	9	8	3	5	3	7	6	3	3	7
Median f	1.07	10.2	0.561	9.8	5.74	18.5	10.1	0.68	1.13	1.72	8.2	2.19
Mean f	1.06	10.1	0.562	9.74	5.75	18.5	10.1	0.679	1.13	1.72	8.2	2.17
MAD f	0.025	0.1	0.02	0.5	0.1	0.5	0.18	0.011	0.04	0.02	0.1	0.07
IQR f	0.045	0.15	0.035	0.925	0.185	0.9	0.355	0.019	0.075	0.05	0.16	0.175
Robust CV % f	3	1	5	7	2	4	3	2	5	2	1	6
Outliers	1	4	3	2	4	5	3	4	4	5	6	4
Stragglers	6	9	3	4	4	1	4	6	0	4	1	1

2016: Exchangeable Na — 1M NH_4OAc extract (15D3) cmol+/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	21	21	21	21	23	23	23	23	24	24	24	24
Minimum	0.135	0.459	0.057	0.294	0.171	0.57	0.11	0.005	0.0183	0.02	0.06	0.04
Maximum	0.74	1.62	0.99	0.894	0.588	32.2	0.411	0.34	4.02	0.24	3.34	5.16
Median i	0.34	1.26	0.155	0.818	0.23	19.6	0.162	0.0325	0.0459	0.116	0.0863	0.177
Mean i	0.355	1.26	0.187	0.774	0.264	19.6	0.192	0.0521	0.215	0.126	0.236	0.381
MAD i	0.029	0.07	0.024	0.057	0.018	0.6	0.026	0.0135	0.0139	0.0135	0.0094	0.0095
IQR i	0.058	0.13	0.04	0.115	0.0355	1.35	0.068	0.0298	0.0453	0.0335	0.0368	0.0235
Robust CV % i	13	8	19	10	11	5	31	68	73	21	32	10
Median f	0.343	1.24	0.156	0.826	0.224	19.5	0.16	0.0305	0.037	0.113	0.085	0.174
Mean f	0.345	1.26	0.156	0.811	0.225	19.7	0.161	0.0331	0.0372	0.113	0.0844	0.174
MAD f	0.0175	0.06	0.0175	0.051	0.011	0.25	0.02	0.0105	0.0106	0.004	0.002	0.004
IQR f	0.0345	0.11	0.0313	0.096	0.021	0.775	0.037	0.0265	0.0156	0.008	0.0036	0.007
Robust CV % f	7	7	15	9	7	3	17	64	31	5	3	3
Outliers	4	3	2	2	5	5	4	2	2	4	7	7
Stragglers	3	1	1	0	1	2	0	2	5	7	4	4

2016: Exchangeable Al — 1M KCl (15G1) cmol+/kg oven dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	15	15	15	15	14	14	14	14	13	13	13	14
Minimum	0.00966	0.001	0.015	0.001	0.002	7.07	0.001	0.016	0.001	0.004	0.001	0.009
Maximum	0.116	0.11	0.103	0.102	0.04	33.4	0.07	0.203	0.1	0.243	0.35	1.07
Median i	0.026	0.00557	0.04	0.004	0.0075	22.9	0.0091	0.0825	0.00909	0.016	0.00729	0.0217
Mean i	0.0333	0.0147	0.0437	0.0144	0.0124	21.3	0.0133	0.0954	0.0237	0.0526	0.0422	0.106
MAD i	0.013	0.00357	0.0075	0.003	0.00251	1.55	0.0041	0.0264	0.00509	0.009	0.00429	0.00745
IQR i	0.0227	0.00875	0.0159	0.00925	0.005	4.68	0.00575	0.0612	0.011	0.0268	0.014	0.0313
Robust CV % i	65	116	29	171	49	15	47	55	90	124	142	107
Median f	0.02	0.005	0.0359	0.00322	0.005	23.5	0.0066	0.073	0.00533	0.008	0.007	0.016
Mean f	0.0241	0.00554	0.0341	0.00415	0.00611	23	0.00705	0.0708	0.00701	0.0112	0.00793	0.0171
MAD f	0.008	0.00217	0.00745	0.00222	0.002	0.95	0.00341	0.016	0.00285	0.003	0.003	0.002
IQR f	0.0173	0.00394	0.0143	0.00412	0.0046	2.03	0.00575	0.0309	0.00577	0.009	0.00507	0.0056
Robust CV % f	64	58	29	95	68	6	65	31	80	83	54	26
Outliers	1	2	3	3	3	3	2	2	3	3	3	3
Stragglers	1	1	0	1	0	1	0	1	0	1	0	2

2016: Extractable Al – Mehlich3 (18F1)mg/kgair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	13	13	13	13	14	14	14	14	14	14	14	14
Minimum	607	568	889	580	302	1340	289	226	60	407	189	548
Maximum	768	1440	1760	965	673	2690	1070	1050	401	1650	1100	1570
Median i	668	847	1580	783	513	2470	977	981	384	1320	863	1270
Mean i	677	857	1540	781	491	2270	886	867	344	1240	798	1190
MAD i	40	46	70	62	16.5	185	72.5	59	10.5	70	31	30
IQR i	94	78	130	105	56.5	405	115	190	20	125	63	55
Robust CV % i	10	7	6	10	8	12	9	14	4	7	5	3
Median f	668	847	1590	783	515	2530	994	997	386	1330	866	1280
Mean f	677	830	1600	781	515	2480	992	1010	384	1330	869	1270
MAD f	40	28	65	62	6	110	35	18	10	50	27	20
IQR f	94	65	113	105	9	180	75.5	49	17.3	85	45	35
Robust CV % f	10	6	5	10	1	5	6	4	3	5	4	2
Outliers	0	2	1	0	5	3	3	3	2	3	3	3
Stragglers	0	0	0	0	1	0	0	2	0	0	0	1

2016: Extractable B – Mehlich3 (18F1)mg/kgair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	13	13	13	13	13	13	13	13	14	14	14	14
Minimum	0.125	0.396	0.19	0.151	0.053	0.05	0.05	0.05	0.053	0.61	0.32	0.29
Maximum	4.01	2.5	2.11	2.65	3.37	0.975	0.953	1.17	0.452	1.89	1.19	1.58
Median i	0.289	2.11	0.437	2.18	1.34	0.26	0.361	0.239	0.145	1.37	0.898	0.855
Mean i	0.554	2.02	0.539	2.07	1.4	0.28	0.345	0.329	0.199	1.33	0.84	0.852
MAD i	0.051	0.16	0.017	0.18	0.16	0.056	0.037	0.052	0.0475	0.135	0.126	0.0785
IQR i	0.092	0.3	0.034	0.3	0.3	0.172	0.141	0.101	0.135	0.233	0.248	0.156
Robust CV % i	24	11	6	10	17	49	29	31	69	13	20	14
Median f	0.282	2.12	0.437	2.22	1.34	0.258	0.376	0.23	0.132	1.37	0.914	0.855
Mean f	0.266	2.15	0.443	2.24	1.34	0.223	0.36	0.231	0.121	1.35	0.88	0.838
MAD f	0.046	0.15	0.017	0.15	0.14	0.055	0.0175	0.0445	0.023	0.09	0.099	0.0715
IQR f	0.0653	0.325	0.025	0.295	0.265	0.155	0.0328	0.0775	0.032	0.158	0.212	0.135
Robust CV % f	17	11	4	10	15	45	6	25	18	9	17	12
Outliers	1	1	4	1	2	1	3	2	2	2	1	2
Stragglers	0	0	0	0	0	0	2	1	3	0	0	0

2016: Extractable Ca – Mehlich3(18F1)mg/kgair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	12	12	12	12	13	13	13	13	14	14	14	14
Minimum	555	1050	1030	6870	1610	1210	3330	434	1090	1160	3340	921
Maximum	756	4850	3330	14900	3130	2010	6300	723	1910	2170	6270	1650
Median i	729	3920	1380	12900	2390	1730	4850	667	1730	1860	5350	1420
Mean i	691	3680	1510	12200	2370	1660	4630	624	1700	1790	5180	1370
MAD i	25.5	200	55	900	130	90	240	42	45	50	225	35
IQR i	109	318	80	2050	200	170	1270	84	92.5	95	615	65
Robust CV % i	11	6	4	12	6	7	19	9	4	4	9	3
Median f	744	3920	1380	13200	2390	1770	4860	680	1740	1860	5400	1420
Mean f	738	3930	1380	13100	2410	1770	4900	668	1750	1860	5330	1420
MAD f	9	25	10	650	50	85	20	16.5	50	40	150	30
IQR f	20.8	40	20	1230	80	135	95	57.3	70	65	355	55
Robust CV % f	2	1	1	7	2	6	1	6	3	3	5	3
Outliers	3	3	2	2	3	3	5	2	3	3	3	3
Stragglers	1	3	2	0	1	0	1	1	0	0	0	0

2016: Extractable Cu - Mehlich3 (18F1) mg/kgair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	13	13	13	13	14	14	14	14	15	15	15	15
Minimum	0.44	0.897	0.64	1.2	1.01	0.64	0.65	1	1.89	1.14	1.01	0.92
Maximum	1.18	3.41	2.24	2.95	2.94	2.12	2.46	3.18	4.8	4.21	3.49	3.26
Median i	0.879	2.92	1.44	2.1	2.21	1.61	2.2	2.74	4.41	3.05	3.1	2.54
Mean i	0.854	2.71	1.42	2.06	2.14	1.53	2.03	2.53	4.17	2.89	2.82	2.41
MAD i	0.109	0.11	0.09	0.12	0.08	0.125	0.175	0.215	0.12	0.28	0.17	0.14
IQR i	0.19	0.2	0.17	0.23	0.138	0.23	0.338	0.375	0.245	0.48	0.51	0.24
Robust CV % i	16	5	9	8	5	11	11	10	4	12	12	7
Median f	0.88	2.94	1.44	2.14	2.2	1.64	2.22	2.81	4.46	3.08	3.2	2.55
Mean f	0.888	2.94	1.42	2.12	2.2	1.62	2.22	2.83	4.49	3.04	3.16	2.56
MAD f	0.095	0.095	0.06	0.085	0.03	0.11	0.155	0.19	0.075	0.225	0.1	0.09
IQR f	0.175	0.183	0.16	0.163	0.05	0.19	0.268	0.315	0.165	0.368	0.2	0.163
Robust CV % f	15	5	8	6	2	9	9	8	3	9	5	5
Outliers	1	3	2	3	4	3	2	3	2	3	2	3
Stragglers	0	0	0	0	1	0	0	0	1	0	2	0

2016: Extractable Fe – Mehlich3 (18F1)mg/kgair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	13	13	13	13	14	14	14	14	15	15	15	15
Minimum	185	40.7	46.9	72.1	94.6	57.7	97.1	113	32	57.6	105	75.2
Maximum	255	241	167	114	202	382	336	356	342	127	274	206
Median i	220	210	54.8	92.1	157	351	267	173	188	67.2	162	117
Mean i	218	196	63.6	89.3	150	324	254	183	189	75.6	170	124
MAD i	18	16	4.8	10.9	5.5	22	13.5	13.5	16	7.6	14	11
IQR i	27	41	6.1	16.5	19.5	42.8	28.8	26.3	32	15.4	24	18
Robust CV % i	9	14	8	13	9	9	8	11	13	17	11	11
Median f	220	212	54.7	92.1	160	363	272	173	191	65.3	162	111
Mean f	218	209	55	89.3	159	356	269	175	195	65.5	161	112
MAD f	18	13.5	4.15	10.9	2.5	14	9.5	13	14.5	5.65	9	6
IQR f	27	29.3	5.8	16.5	4.25	32.5	17	24.8	25.8	9.13	10	11
Robust CV % f	9	10	8	13	2	7	5	11	10	10	5	7
Outliers	0	1	1	0	4	2	2	2	3	3	4	4
Stragglers	0	0	0	0	2	1	2	0	0	0	2	0

2016: Extractable K – Mehlich3 (18F1)mg/kgair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	12	12	12	12	13	13	13	13	14	14	14	14
Minimum	88	56.2	35	2.78	115	14.8	51	174	30	315	289	322
Maximum	877	619	447	275	805	457	569	902	429	958	888	999
Median i	235	594	80.7	215	393	23.7	130	521	41.7	534	458	562
Mean i	269	511	106	189	401	56.9	158	503	68.8	544	478	573
MAD i	18.5	18.5	4.8	2.5	34	3.6	8	64	3.45	26.5	25	17
IQR i	54.8	61.5	9.13	12.5	66	5.3	15	101	5.7	50.5	42.8	33.5
Robust CV % i	17	8	8	4	12	17	9	14	10	7	7	4
Median f	235	607	80.7	216	389	23.7	130	521	41.5	534	457	562
Mean f	226	606	79.1	216	376	23.5	130	497	41.1	541	460	563
MAD f	14	3	3.85	1.5	31	3.15	5	62	3.3	24	7	10.5
IQR f	43.5	5	7.1	2.25	45	5.5	7	88	5.6	43	18	18.3
Robust CV % f	14	1	7	1	9	17	4	13	10	6	3	2
Outliers	2	3	2	4	3	1	3	2	1	3	3	4
Stragglers	0	2	0	0	0	0	1	0	0	0	2	0

2016: Extractable Mg – Mehlich3 (18F1) mg/kgair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	12	12	12	12	13	13	13	13	14	14	14	14
Minimum	79	48.1	34	14	403	1030	628	40	128	96	422	117
Maximum	148	1360	955	1420	986	2450	1370	119	184	232	1130	281
Median i	136	1250	69.4	1320	746	2230	1290	82.7	170	219	990	269
Mean i	129	1110	140	1140	741	2160	1230	82.2	167	207	949	256
MAD i	8	50	2.05	80	14	80	60	6.6	4.5	5.5	37.5	8
IQR i	15.5	82.5	3.35	226	24	140	90	11.5	8.5	14.3	69.8	15.8
Robust CV % i	8	5	4	13	2	5	5	10	4	5	5	4
Median f	137	1270	69.4	1320	746	2260	1290	82.7	171	219	999	269
Mean f	137	1270	70	1330	744	2260	1280	82.7	170	216	995	267
MAD f	4.5	45	0.9	70	9	70	60	4.9	5	5	31	6
IQR f	8	80	1.9	80	13	150	92.5	9.2	8	13	52	15
Robust CV % f	4	5	2	4	1	5	5	8	3	4	4	4
Outliers	2	2	2	2	3	1	1	2	1	1	2	1
Stragglers	0	0	1	1	1	0	0	0	0	0	1	0

2016: Extractable Mn – Mehlich3 (18F1) mg/kgair dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	13	13	13	13	14	14	14	14	15	15	15	15
Minimum	141	63	66.9	133	103	42	91.1	130	254	598	226	511
Maximum	174	108	100	173	168	221	213	431	320	862	396	754
Median i	156	95.2	94.4	150	118	61.6	112	395	288	748	296	645
Mean i	158	91.5	91.3	152	120	71.2	119	370	287	757	302	645
MAD i	4	6.9	4.6	8	5	2.95	4	21.5	11	38	16	29
IQR i	7	9.4	10.4	14	8	5.73	12.5	27.3	21.5	75	34.5	54.5
Robust CV % i	3	7	8	7	5	7	8	5	6	7	9	6
Median f	156	95.6	95.1	150	118	61.6	111	395	288	751	296	645
Mean f	155	93.9	93.3	152	117	61.1	112	389	287	769	300	647
MAD f	2	5.6	4.25	8	5	2.6	3	20	11	37.5	11	27
IQR f	5	9.3	8.55	14	5	4.7	4.5	26	21.5	66.8	32	53
Robust CV % f	2	7	7	7	3	6	3	5	6	7	8	6
Outliers	3	1	1	0	1	4	3	1	0	1	2	1
Stragglers	1	0	0	0	0	0	0	0	0	0	0	1

2016: Extractable Na - Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	12	12	12	12	13	13	13	13	14	14	14	14
Minimum	34.1	22.1	23.9	104	38	515	28.9	3.56	7.18	8.65	17.7	38.6
Maximum	408	314	199	265	419	5940	419	384	358	378	401	384
Median i	75.1	285	31.9	176	51.9	4770	39.6	9.16	14.8	30	27.4	45.5
Mean i	95.6	262	46	178	87.1	4440	69.7	42.1	41	62.7	59.6	78.7
MAD i	8.3	13.5	4.6	10	7.2	180	6.8	4.48	6.32	3.8	8.9	3.3
IQR i	21.6	28	6.5	17.8	13.2	350	12.8	24.5	14.3	24.8	33.1	17.2
Robust CV % i	21	7	15	7	19	5	24	198	72	61	90	28
Median f	77.5	287	31.2	176	51	4770	39.5	5.51	14.2	28.3	19.8	43.6
Mean f	76.1	283	32	176	52	4750	40.6	6.79	14.9	28.5	22.5	43.5
MAD f	3.45	14	4.3	9	6.5	65	5.7	1.82	4.26	1.35	2.1	1.8
IQR f	6.9	25	6.9	14.8	10.5	115	8.63	4.48	7.39	2.4	4.2	3.4
Robust CV % f	7	6	16	6	15	2	16	60	39	6	16	6
Outliers	2	1	1	2	2	3	1	4	1	6	3	4
Stragglers	2	0	0	0	0	2	0	0	1	0	2	0

2016: Extractable P - ICP — Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	12	12	12	12	13	13	13	13	14	14	14	14
Minimum	16	5.9	6.98	1.2	7	17	12	14	1.3	16	9.6	45
Maximum	30.6	14.7	16	3.39	21.8	61.5	42.6	42.6	48.8	412	264	912
Median i	26.7	13.5	9.35	2.71	19.6	53.2	37.6	36.6	4.02	31.3	27.3	101
Mean i	25.5	12.3	9.68	2.56	18.2	47.6	35.6	34.1	6.75	58.2	43.2	154
MAD i	1.95	0.35	1.08	0.415	0.9	4.5	1.7	4.5	0.32	2.9	0.8	4.25
IQR i	3.45	2.12	1.76	0.718	1.8	11.1	3.1	8.9	0.868	5.13	1.48	8.85
Robust CV % i	10	12	14	20	7	15	6	18	16	12	4	6
Median f	27.3	13.6	9.1	2.71	19.9	53.8	38.4	38.3	4.13	31.3	27.3	101
Mean f	27.3	13.6	9.11	2.56	20	53.4	38.5	37.3	4.09	32.3	27.3	99.5
MAD f	1.25	0.1	0.88	0.415	0.55	2.2	2	2.5	0.13	2.45	0.7	3
IQR f	2.23	0.25	1.58	0.718	0.925	3.4	3.6	4.8	0.29	4.58	1.2	5.95
Robust CV % f	6	1	13	20	3	5	7	9	5	11	3	4
Outliers	2	3	1	0	3	2	2	1	4	2	3	2
Stragglers	0	2	0	0	0	1	0	1	1	0	0	0

2016: Extractable S - Mehlich3 (18F1) mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	10	10	10	10	12	12	12	12	12	12	12	12
Minimum	8.2	4	25.4	7.8	2.73	905	1.46	4.18	0.2	30	5.57	30
Maximum	19.5	25.5	51.7	68.4	190	7690	97.2	41.9	22.9	52.4	56.8	53.3
Median i	17	12.5	48.6	17	15.6	7200	13.4	36.2	9.11	45.8	22.5	43.2
Mean i	15.7	14	45.7	24	30.8	5890	26.5	30.6	9.8	44	22.8	42.4
MAD i	0.75	0.6	2.35	1.2	1.55	480	5	5.4	0.885	3.3	0.95	1.85
IQR i	1.35	1.33	4.28	3.85	3.05	2330	12.7	10.3	1.58	6.68	3.35	3.2
Robust CV % i	6	8	7	17	15	24	70	21	13	11	11	5
Median f	17.3	12.5	49.4	16.7	15.6	7330	11.2	37.6	9.11	45.8	22.9	43.4
Mean f	17.6	12.7	49.2	16.7	15.6	7310	13.1	35.6	9.16	45.3	22.9	43.7
MAD f	0.6	0.3	1.5	0.2	1.45	150	3.2	3.4	0.185	3	0.55	1.2
IQR f	1.35	0.7	2.6	0.3	2.53	255	8.29	6.4	0.4	4.5	1.03	2.3
Robust CV % f	6	4	4	1	12	3	55	13	3	7	3	4
Outliers	2	3	2	3	4	4	2	2	4	1	4	3
Stragglers	0	0	0	2	0	0	0	0	2	0	0	0

2016: Extractable Zn — Mehlich3 (18F1)mg/kg air dry

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	13	13	13	13	14	14	14	14	15	15	15	15
Minimum	0.371	0.547	0.056	0.028	1.87	10.1	0.05	0.1	1.09	0.05	0.19	1.67
Maximum	1	3.07	4.77	0.71	5.84	27.6	1.27	1.24	3.83	1.75	1.86	4.62
Median i	0.836	0.801	4.19	0.435	3.85	22.2	1.1	1.06	2.87	1.1	1.51	4.06
Mean i	0.813	0.961	3.92	0.433	3.89	22	1.03	0.998	2.85	1.06	1.43	3.93
MAD i	0.113	0.047	0.19	0.069	0.255	1.4	0.09	0.129	0.29	0.1	0.11	0.27
IQR i	0.223	0.08	0.3	0.099	0.48	2.9	0.153	0.234	0.51	0.175	0.18	0.49
Robust CV % i	20	7	5	17	9	10	10	16	13	12	9	9
Median f	0.883	0.801	4.2	0.435	3.85	22.1	1.1	1.08	2.89	1.1	1.51	4.07
Mean f	0.85	0.806	4.24	0.445	3.89	22.1	1.1	1.07	2.98	1.09	1.51	4.09
MAD f	0.0855	0.032	0.17	0.061	0.245	0.9	0.08	0.1	0.27	0.09	0.1	0.27
IQR f	0.187	0.049	0.318	0.094	0.38	1.65	0.13	0.182	0.47	0.15	0.16	0.518
Robust CV % f	16	5	6	16	7	6	9	12	12	10	8	9
Outliers	1	4	1	2	2	2	1	1	1	2	1	1
Stragglers	0	0	0	0	0	1	0	0	0	0	0	0

2016: Extractable K — Bicarbonate (18A1) mg/kg

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	9	9	9	9	10	10	10	10	9	9	9	9
Minimum	25.6	156	79.2	71.4	180	29	100	176	47	486	408	561
Maximum	562	880	506	352	510	117	276	752	125	680	495	665
Median i	306	615	103	203	429	51.3	197	618	64.2	548	465	597
Mean i	318	531	180	230	415	60.5	195	583	75.7	560	462	608
MAD i	46	75	19	57	30.5	7.25	18.5	66	16.6	35	29	23
IQR i	118	128	70.4	87	57	25.9	30.5	116	34.7	72	44	55
Robust CV % i	29	15	51	32	10	37	12	14	40	10	7	7
Median f	306	633	94.2	203	429	45.3	203	623	64.2	548	465	597
Mean f	325	630	94.3	230	441	45.6	206	628	75.7	560	462	608
MAD f	34	3	9.5	57	30	5.2	14	57	16.6	35	29	23
IQR f	69.5	8.5	16.6	87	48	7.25	25.5	102	34.7	72	44	55
Robust CV % f	17	1	13	32	8	12	9	12	40	10	7	7
Outliers	2	2	2	0	1	2	2	1	0	0	0	0
Stragglers	0	3	1	0	0	1	1	0	0	0	0	0

2016: Total Organic Matter (6G1)%

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	5	5	5	5	6	6	6	6	5	5	5	5
Minimum	1.7	1.32	7.08	2.88	1.48	2.54	1.98	3.92	0.838	5.12	5.08	6.5
Maximum	3.2	5.8	11.6	8.6	5.57	8.64	8.77	7.1	3.55	14.7	10.3	11.1
Median i	2.9	4.1	10.2	7.1	4.06	6.85	5.65	6.31	3.03	13.7	6.14	10.3
Mean i	2.57	3.66	9.97	5.89	3.59	6.25	5.22	5.71	2.35	11.4	7.3	9.38
MAD i	0.3	1.7	1.1	1.5	1.09	1.62	1.29	0.5	0.52	1	1.06	0.8
IQR i	0.85	2.92	1.58	3.79	2.45	3.19	2.02	1.89	1.74	5.06	2.96	2.62
Robust CV % i	22	53	11	40	45	35	26	22	43	27	36	19
Median f	2.9	4.1	10.2	7.1	4.06	6.85	5.65	6.31	3.03	14.3	6.14	10.3
Mean f	2.57	3.66	9.97	5.89	3.59	6.25	5.22	5.71	2.35	14.2	7.3	9.38
MAD f	0.3	1.7	1.1	1.5	1.09	1.62	1.29	0.5	0.52	0.4	1.06	0.8
IQR f	0.85	2.92	1.58	3.79	2.45	3.19	2.02	1.89	1.74	0.5	2.96	2.62
Robust CV % f	22	53	11	40	45	35	26	22	43	3	36	19
Outliers	0	0	0	0	0	0	0	0	0	1	0	0
Stragglers	0	0	0	0	0	0	0	0	0	1	0	0

2016: Aqua Regia Digestible Calcium (17B1 + 17B2) mg/kg

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	5	5	5	5	8	8	8	8	8	8	8	8
Minimum	719	2170	1710	21000	2290	1830	8710	727	2380	1410	6280	1730
Maximum	10000	5690	2420	25800	3740	2530	13100	1100	3010	3000	8700	2300
Median i	870	4960	2250	23800	3320	2130	12000	847	2820	2270	6820	2080
Mean i	2660	4430	2200	23700	3200	2140	11300	864	2720	2260	7220	2070
MAD i	78	730	140	1410	45	125	1000	53	170	245	370	125
IQR i	105	1440	170	2400	155	175	2750	92.5	540	323	1290	190
Robust CV % i	9	21	6	7	3	6	17	8	14	11	14	7
Median f	831	5170	2320	23800	3350	2130	12000	824	2820	2270	6630	2100
Mean f	820	4990	2320	23700	3340	2140	11300	831	2720	2280	6630	2110
MAD f	52.5	365	85	1410	5	125	1000	46	170	100	100	80
IQR f	103	752	155	2400	20	175	2750	81	540	153	110	170
Robust CV % f	9	11	5	7	0	6	17	7	14	5	1	6
Outliers	1	0	0	0	3	0	0	1	0	0	1	0
Stragglers	0	1	1	0	1	0	0	0	0	2	2	1

2016: Aqua Regia Digestible Copper (17B1 + 17B2) mg/kg

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	5	5	5	5	8	8	8	8	9	9	9	9
Minimum	7.37	7.6	12.1	21.5	10.9	5.3	26	11.8	21.4	31	18	15
Maximum	10.8	22.5	16.8	30	18.8	11	54.1	21.4	29.6	71.1	28.7	25.8
Median i	8.32	19.2	14.3	26.2	15.3	8.52	37.2	18.6	27.9	60.2	26.3	23.9
Mean i	8.82	17.7	14.4	26.2	14.4	8.05	39.9	17	26.4	54.7	25.1	22.3
MAD i	0.95	1.1	1.6	2.1	2.5	1.9	7.9	2.55	1.7	10.8	2.3	1.5
IQR i	1.48	1.2	2.8	3.1	5.1	3.32	13.5	7.75	4.7	26.7	3.8	3.7
Robust CV % i	13	5	15	9	25	29	27	31	12	33	11	11
Median f	8.32	19.8	14.3	26.2	15.3	8.52	37.2	18.6	27.9	60.2	26.3	24.1
Mean f	8.82	20.3	14.4	26.2	14.4	8.05	39.9	17	26.4	54.7	25.1	23.2
MAD f	0.95	0.6	1.6	2.1	2.5	1.9	7.9	2.55	1.7	10.8	2.3	1.35
IQR f	1.48	1.68	2.8	3.1	5.1	3.32	13.5	7.75	4.7	26.7	3.8	2.9
Robust CV % f	13	6	15	9	25	29	27	31	12	33	11	9
Outliers	0	1	0	0	0	0	0	0	0	0	0	1
Stragglers	0	0	0	0	0	0	0	0	0	0	0	0

2016: Aqua Regia Digestible Iron(17B1 + 17B2) mg/kg

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	5	5	5	5	7	7	7	7	9	9	9	9
Minimum	13000	14000	19000	30200	13700	18700	33000	12900	14600	49300	21900	27600
Maximum	15300	36600	28300	45000	32300	45800	56700	21500	32400	117000	47400	63500
Median i	13400	32800	24100	41200	23800	28900	44500	18300	29700	98300	42800	56300
Mean i	13800	29800	23700	39700	22400	30200	43700	17100	26800	97100	38200	51200
MAD i	400	1230	2770	2530	4300	3400	10900	3200	2700	6700	4300	4500
IQR i	603	2230	4500	4830	6900	6500	19400	5600	5700	8600	14800	12100
Robust CV % i	3	5	14	9	21	17	32	23	14	6	26	16
Median f	13400	33300	24100	41200	23800	28000	44500	18300	30000	102000	43800	57200
Mean f	13800	33700	23700	39700	22400	27600	43700	17100	28400	103000	40200	58200
MAD f	400	1120	2770	2530	4300	1800	10900	3200	1800	4450	3100	2000
IQR f	603	2010	4500	4830	6900	3180	19400	5600	4930	9900	7200	3380
Robust CV % f	3	4	14	9	21	8	32	23	12	7	12	4
Outliers	0	1	0	0	0	1	0	0	1	1	1	1
Stragglers	0	0	0	0	0	0	0	0	0	0	0	2

2016: Aqua Regia Digestible Magnesium (17B1 + 17B2) mg/kg

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	5	5	5	5	8	8	8	8	9	9	9	9
Minimum	595	2240	596	5870	1970	2660	16800	139	4040	444	3010	531
Maximum	789	5960	2220	25400	3880	4080	22400	1020	6290	3870	5300	1210
Median i	770	5330	778	6600	3370	3590	19500	652	5520	1080	4490	970
Mean i	729	4870	1040	10200	3260	3560	19200	618	5280	1320	4430	960
MAD i	19	330	102	380	365	175	1500	222	690	150	380	160
IQR i	83	510	173	635	635	345	2680	337	1180	230	490	246
Robust CV % i	8	7	16	7	14	7	10	38	16	16	8	19
Median f	778	5500	743	6410	3370	3650	19500	652	5520	1080	4530	995
Mean f	762	5520	740	6390	3260	3690	19200	618	5280	999	4620	1010
MAD f	9.5	255	86.5	318	365	170	1500	222	690	140	115	123
IQR f	33.5	450	124	531	635	360	2680	337	1180	318	340	225
Robust CV % f	3	6	12	6	14	7	10	38	16	22	6	17
Outliers	1	1	1	1	0	1	0	0	0	1	0	0
Stragglers	0	0	0	0	0	0	0	0	0	0	3	1

2016: Aqua Regia Digestible Manganese (17B1 + 17B2) mg/kg

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	5	5	5	5	7	7	7	7	9	8	9	9
Minimum	339	173	693	587	290	82	610	1000	560	3730	880	2100
Maximum	387	447	896	860	366	121	1360	1650	686	5050	1270	3840
Median i	366	402	834	766	346	102	953	1280	632	3840	1140	2920
Mean i	365	365	818	741	338	99.8	937	1330	629	4020	1120	2960
MAD i	4	29	16	88	12	10.6	31	50	20	80	50	60
IQR i	6	57	31	138	18	18.2	120	190	33	240	100	140
Robust CV % i	1	11	3	13	4	13	9	11	4	5	7	4
Median f	368	416	842	766	346	102	954	1280	632	3810	1160	2920
Mean f	372	413	849	741	338	99.8	956	1280	629	3830	1150	2940
MAD f	3	22.5	15.5	88	12	10.6	11	20	20	35	35	30
IQR f	8.75	39.5	30.8	138	18	18.2	14.3	30	33	57.5	70	70
Robust CV % f	2	7	3	13	4	13	1	2	4	1	4	2
Outliers	1	1	1	0	0	0	3	3	0	1	1	2
Stragglers	0	0	0	0	0	0	0	0	0	1	0	1

2016: Aqua Regia Digestible Sodium (17B1 + 17B2)mg/kg

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	5	5	5	5	8	8	8	7	9	9	9	9
Minimum	85.1	195	149	338	55	3440	120	7	15	57	28	42
Maximum	1500	694	487	513	257	7700	854	87.7	283	285	172	148
Median i	102	480	263	357	158	7070	465	30.6	58.3	190	125	119
Mean i	385	480	287	405	162	6740	464	43.7	127	179	116	114
MAD i	16.9	130	64	19	69.5	180	91.5	23.6	43.3	40	25	12
IQR i	36	188	117	124	117	425	145	53.9	156	61	45.3	21
Robust CV % i	26	29	33	26	55	4	23	130	198	24	27	13
Median f	102	480	263	346	158	7200	465	30.6	55.8	190	125	122
Mean f	106	480	287	347	162	7210	464	43.7	55.7	179	116	123
MAD f	8.45	130	64	8	69.5	280	91.5	23.6	2.15	40	25	10.5
IQR f	13.7	188	117	9.5	117	510	145	53.9	4.03	61	45.3	20.5
Robust CV % f	10	29	33	2	55	5	23	130	5	24	27	12
Outliers	1	0	0	1	0	1	0	0	2	0	0	1
Stragglers	0	0	0	1	0	0	0	0	3	0	0	0

2016: Aqua Regia Digestible Zinc (17B1 + 17B2) mg/kg

Statistical parameters	Soil sample identification and values											
	March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
	ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
No of results	5	5	5	5	8	8	8	8	9	9	9	9
Minimum	11.3	13.6	47.8	28.9	20.4	32.4	41	8.84	56.6	31	46	25
Maximum	21.8	55	71.4	49.2	62.6	58.6	76.8	40.6	88.8	83.8	72.2	49.3
Median i	12.8	35.4	63.4	40.7	42	44.4	60.6	22.7	71.2	57.8	60.4	38.9
Mean i	14.7	34.9	61.8	40.4	41.2	43.5	60	23.2	71.3	57.5	60.7	38.4
MAD i	1.5	13.7	8	2.2	4.65	4.45	8.95	7.1	3.9	8.5	4.5	3.1
IQR i	4.2	27.3	15.9	2.6	8.98	7.35	14	13.3	7.3	13.8	6	5.5
Robust CV % i	24	57	19	5	16	12	17	44	8	18	7	10
Median f	12.8	35.4	63.4	40.7	42	44.4	60.6	22.7	70.9	57.8	60.4	39
Mean f	14.7	34.9	61.8	40.4	41.1	43.5	60	23.2	69.2	57.5	60.7	40
MAD f	1.5	13.7	8	2.2	3.1	4.45	8.95	7.1	3.65	8.5	4.5	2.75
IQR f	4.2	27.3	15.9	2.6	4.88	7.35	14	13.3	8.45	13.8	6	5.48
Robust CV % f	24	57	19	5	9	12	17	44	9	18	7	10
Outliers	0	0	0	0	1	0	0	0	1	0	0	1
Stragglers	0	0	0	0	1	0	0	0	0	0	0	0

4. Comments on Measurement Performance

Based on final median concentrations across laboratories, only one of 12 test soils was saline and this sample is likely a repeat of the actual acid sulfate soil that was run in 2014-15; pHw, extractable S, EC and Cl were near identical over the two years. Four of the 12 soils were strongly alkaline and for three of these, there were significant concentrations of inorganic C evident. Only one soil was very strongly acidic allowing quantification of exchangeable Al, as indicated by a very acceptable 6% CV across 14 laboratories for that sample.

Table 4.1, shows there is a shift in the positioning of tests that have low robust CV's after the removal of outliers and stragglers. Some Mehlich 3 tests are now emerging as having better precision than the more traditional test for the respective plant available nutrient, for example Meh. 3 Ext. Ca, Mg and S, are recording lower CV's than exchangeable Ca and Mg by methods 15A1 and 15D3; while for S, CV's are better than either calcium phosphate extractable S (10 B1-3) and KCL_{40} extractable S (10D1).However there were more demerit points (outliers and stragglers in relative terms) for the Meh 3 tests.

Table 4.1. The six best performed and worst performed soil chemical tests for 2016, based on percent robust coefficients of variation (%CV as grand medians) after the removal of "outliers" and "stragglers", excluding pH soil tests which are logarithmic and have been shown over the years to be in the range 1 - 3% CV.

Best (Lowest Robust %CVs)	
Soil Method	***%CV***
Exch. Mg (15D3)	3.0
Meh 3 Ext. Ca (18F1)	3.0
Meh 3 Ext. Mg (18F1)	4.0
Meh 3 Ext. S (18F1)	4.0
Total Carbon (6B2)	4.5
Exch. K (15D3)	4.5

Worst (Highest Robust %CVs)	
Soil Method	***%CV***
KCl Ext. NO_3-N (7C2)	14
Olsen P (9C1 + 9C2)	14.5
DTPA Extr. Fe	17.5
Bray P (pooled) (9E1 + 9E2)	17.5
Water soluble. Cl - potentiometric (5A1 + 5A2)	18.5
Hot $CaCl_2$ Extr. B (12C2)	21.5

Eight new tests are included in this report, namely Organic Matter by loss on ignition (6G1) and an aqua regia digest method for seven metals. These tests will not be considered for certification this year, but the LPC will consider doing so once the number of submitted results are sufficient for statistical analysis. It is likely that more metals will be added to analytical suites of participants in future.Being an aqua-regia digest, it will not be possible to recover true total metal concentrations, as the digest will not be vigorous enough to solubilize metals tied up in silicate complexes in soils. For many years the Wageningen University have run their WEPAL inter-laboratory proficiency program, and they separate"Total" Metals in soils into three categories.

1. Real Totals. Appropriate methods include 17A1 (X-Ray Fluorescence), 17A2 Acid digestion using hydrofluoric acid (HF, which dissolves silicate complexes), or an alkaline fusion approach such as that described for total P (9A2) by Rayment and Lyons (2011), referenced earlier in this report.
2. "So Called Totals" or pseudo totals which cover different acid digestions (not including HF nor aqua regia digestions).
3. Aqua regia digestible metals. This is the method title adopted in this ASPAC program, as it best describes the method adopted by the participants..

Results should be reported on an oven dry basis and units should depend on expected concentration ranges. For the macro-elements (Al, Fe, Ca, Mg, Na and K) units should be % oven dry, while for other elements/metals mg/kg oven dry should suffice.

Depending on the soil, results for "total" K using methods in category 2 or 3 can be less than 50% of real total K concentrations using methods in category 1. Fe and Al will also show significant differences between method categories 1 cf. 2 and 3.

Appendix 1: List of laboratories (including contact details) that participated in ASPAC's Soil ILPP in 2016, arranged by country

Name (position)	*Facility*	*Street and/or Postal Address*	*Country*	*Email*
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Appendix 2: Summary examples of homogeneity data and statistical assessments for soil samples used in the ASPAC Soil ILPP in the 2016

Sample name		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
Sub-sample													
1	Rep 1	0.082	0.075	0.347	0.093	0.081	0.084	0.092	0.198	0.074	0.207	0.217	0.301
	Rep 2	0.082	0.075	0.341	0.094	0.083	0.083	0.092	0.199	0.073	0.209	0.218	0.3
2	Rep 1	0.081	0.074	0.341	0.093	0.081	0.084	0.091	0.2	0.074	0.209	0.22	0.293
	Rep 2	0.081	0.075	0.353	0.093	0.08	0.082	0.092	0.199	0.073	0.208	0.219	0.3
3	Rep 1	0.082	0.074	0.357	0.095	0.085	0.083	0.092	0.199	0.073	0.208	0.221	0.299
	Rep 2	0.08	0.074	0.346	0.094	0.078	0.082	0.091	0.197	0.073	0.208	0.222	0.3
4	Rep 1	0.083	0.074	0.354	0.092	0.085	0.083	0.092	0.197	0.075	0.208	0.219	0.3
	Rep 2	0.086	0.074	0.394	0.094	0.084	0.082	0.091	0.197	0.073	0.209	0.22	0.307
5	Rep 1	0.085	0.075	0.385	0.092	0.086	0.082	0.092	0.201	0.073	0.207	0.219	0.297
	Rep 2	0.084	0.075	0.356	0.094	0.086	0.083	0.092	0.198	0.073	0.206	0.22	0.299
6	Rep 1	0.083	0.075	0.348	0.092	0.085	0.083	0.091	0.199	0.077	0.214	0.219	0.295
	Rep 2	0.08	0.074	0.35	0.094	0.085	0.083	0.092	0.199	0.072	0.208	0.219	0.308
7	Rep 1	0.08	0.076	0.347	0.092	0.08	0.083	0.091	0.198	0.073	0.214	0.219	0.302
	Rep 2	0.081	0.076	0.38	0.094	0.08	0.083	0.092	0.201	0.073	0.208	0.221	0.303
8	Rep 1	0.081	0.076	0.376	0.097	0.08	0.082	0.091	0.198	0.079	0.216	0.22	0.298
	Rep 2	0.081	0.075	0.381	0.093	0.083	0.083	0.091	0.205	0.073	0.207	0.22	0.303
9	Rep 1	0.081	0.074	0.391	0.093	0.081	0.083	0.091	0.197	0.075	0.222	0.219	0.3
	Rep 2	0.081	0.076	0.411	0.092	0.082	0.083	0.091	0.202	0.073	0.207	0.219	0.303
10	Rep 1	0.081	0.073	0.387	0.094	0.087	0.083	0.091	0.203	0.073	0.222	0.218	0.303
	Rep 2	0.084	0.072	0.384	0.093	0.081	0.083	0.091	0.205	0.073	0.208	0.221	0.299
Mean		0.082	0.746	0.366	0.093	0.083	0.083	0.091	0.2	0.074	0.21	0.219	0.3
Analytical SD		1E-06	3E-07	2E-04	2E-06	5E-06	4E-07	2E-07	5E-06	3E-06	3E-05	9E-07	2E-05
Sampling SD		1E-06	6E-07	3E-04	0	2E-06	0	3E-08	1E-06	0	0	3E-07	0
SD proficiency data		0.0082	0.0114	0.393	0.012	0.0044	0.0039	0.004	0.004	0.006	0.016	0.017	0.011
Status		**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**	**H**

* Homogeneity statistics calculated according to *Thompson, M., Ellison, S.L.R. and Wood, R. (2006). "The International Harmonised Protocol For the Proficiency Testing of Analytical Chemistry Laboratories." Pure Appl. Chem. Vol. 78, No. 1, pp. 145-196. IUPAC Technical Report*

Appendix 3: Statistical procedures used by ASPAC for its contemporary soil ILPP

Refer to Table 4 for a description of most statistical terms and their meaning. Of most significance is the "median / MAD" non-parametric, iterative procedure for identifying "outliers" (††) and "stragglers" (†) within datasets for particular tests and samples from multiple (typically 7or greater) laboratories. See references in the body of the report for more details. Also, the median (μ) is regarded as a good estimate of the true mean, while the MAD; i.e., the median of the absolute deviations from the median, @), is regarded as a good estimate of the standard deviation.

After tabulating the data with a separate column for each sample result and a separate row for each laboratory, calculations were applied iteratively. Each iteration operated at an action level of [(X- μ)/f@] (called the "ASPAC Score" for convenience)> 2, where "X" is the value reported by the laboratory (one replicate assumed), "μ" is the median of the population of values, and "f@" is a code for the Gaussian distribution of the sample size "n", approximated by [0.7722 + 1.604/n * t, with t = the Student's "t" of5% (two tailed), with n-1 degrees of freedom]. Note that for program reports up to and including 2009-10, Student "t's" of 2.5% (two-tailed) were used.

Excluding any case when a laboratory reported no result (or a non-numeric value) [these were automatically excluded], the laboratories at first iteration with an "ASPAC score" >2 were rated as "outliers" (††). Following their removal (if any), the remaining population of laboratory data were subject to a second iteration involving a recalculation of the "ASPAC score". Where this was again >2, relevant laboratories were rated as "stragglers" (†). The revised Student "t" at 5% (two tailed) makes the test slightly stricter than previously.

The other statistics summarized in Table 4 were calculated on the same populations of data. Only the first (i) and second (final; f) values appear in the data summaries in Section 3.

Appendix 4: "Raw" 2016 soil data reported by laboratories for 12 samples across three "rounds"

These tabulations list the "raw" data provided by participating laboratories for each method, with unnecessary precision removed after completion of statistical tests to assist data presentation. Statistical "outliers" and "stragglers" are indicated by †† and †, respectively. The soil method codes are those of Rayment and Lyons (2011), referenced earlier.

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Air-Dry Moisture Content 2A1 (%)											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
8888	2A1	0.88	3.75	4.37	5.75	2.29	2.76	4.04	1.68	0.4 ††	8.1	4.3 ††	2.7 ††
10173	2A1	1.11	3.73	4.22	5.87	2.4	3.1	4.5	2	0.9	8.6	5.7	3.3
10181	2A1	1.3	4.42	4.88 †	6.38	2.75	3.41	5.04	1.9	1.46	11	6.49	4.13
21043	2A1	1.22	8.57 ††	5.34 ††	8.23 †	2.19	2.91	4.01	1.48	1.18	8.36	4.94 †	3.18
21088	2A1	0.89	3.65	3.93	5.83	2.05	2.52	2.99 ††	1.46	1.03	9	5.37	3.23
21091	2A1	0.8 †	3.8	4.3	5.9	2	2 †	2 ††	2	1	9	6	4
21100	2A1	0.62 †	2.66 ††	3.24 ††	3.94 †	1.46 ††	1.99 †	2.84 ††	0.995 ††	1.53	9.61	5.98	3.75
21115	2A1	0.95	3.91	3.83 †	5.51	2.3	2.85	4.14	1.5	1.12	8.74	5.6	3.63
21138	2A1	0.71 †	2.79 ††	3.64 †	4.78 †	1.92 †	2.69	3.82	1.26	1.08	10.2	6.24	3.06
21182	2A1	1.2	3.9	4.3	5.7	2.49	3.44	4.62	1.81	1.3	9.9	6	3.8
21193	2A1	1.14	3.89	4.22	5.89	2.41	2.8	4.4	1.66	1.17	9.96	6.19	3.79
21196	2A1	1.31	4.09	4.35	5.87	1.74 ††	2.06 †	3.32 †	1.17 †	3.56 ††	6.83 ††	9.73 ††	1.35 ††
21230	2A1	1.13	4.14	4.49	6.13	2.55	3.35	8.46 ††	1.7	1.23	9.31	6.61	3.8
50004	2A1	1.11	3.58	4.18	5.96	1.84 †	2.88	4.08	1.52	1.12	11.8	5.71	3.99
50005	2A1	1.18	4.11	4.66	6.33	2.48	2.99	1.67 ††	4.39 ††	1.4	9.93	5.92	4.15
50006	2A1					2.4	3.12	4.53	1.75	1.23	9.58	5.56	3.32
50007	2A1	1.01	1.04 ††	1.04 ††	1.06 †	2.44	3.25	4.28	1.63	1.07	8.85	4.69 †	3.92
50011	2A1	1.22	3.95	4.38	6.16	2.47	2.86	4.53	1.61	1.42	10.4	5.93	3.95
50012	2A1	1.09	3.85	4.31	5.93	1.75 ††	2.67	3.47 †	1.19 †	1.23	9.59	6.19	3.73
50014	2A1	1.12	4.56 †	4.7	6.82 †	2.58	3.17	4.46	1.63	1.01	9.92	5.94	3.53
50017	2A1	1.19	4.27	5.12 †	6.53	2.49	2.89	4.5	1.54	1.31	10.1	6.77	4.25
50020	2A1	1	3.7	4.4	5.5	2.55	3.7 †	4.85	1.9	0.65 ††	3.25 ††	3.65 ††	2.1 ††
50022	2A1	1.1	4.4	4.7	6.5	2.2	2.8	4.26	1.58	1.3	10.6	6.4	3.7
50023	2A1	1.01	1.04 ††	1.05 ††	1.06 †	2.48	3.03	4.64	1.77	1.34	10.4	6.22	4.16
50024	2A1	0.97	4	4.38	5.93	2.56	2.79	4.61	1.68	1.36	9.23	6.4	3.6
50029	2A1	1.17	3.79	4.22	5.66	2.29	2.65	4.15	1.54	1.17	8.94	5.75	3.39
50030	2A1	1.32	4.4	4.87 †	6.58	2.31	3.33	4.4	1.61	1.29	10.4	5.99	3.87
50031	2A1	1.4	4.7 ††	4.9 †	7.1 †	2.8	3.8 †	5.1	2	1.2	10.1	6.2	3.9
50032	2A1	1.2	4.03	4.33	6.03	2.5	2.96	4.36	1.72	1.24	10.4	5.91	3.76
50033	2A1	1.12	4.04	4.21	6.07	1.96	2.83	4.08	2.27 ††	1.26	10.5	6.38	4

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Air-Dry Moisture Content 2A1 (%)											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
50038	2A1	1.13	4.62 †	4.41	7.59 †	2.62	3.58 †	4.15	1.77				
50039	2A1	0.92	3.79	4.08	5.6	1.39 ††	2.2 †	3.09 ††	0.97 ††	0.96	8.63	4.9 †	3.07
50044	2A1										9	5 †	3
52402	2A1	1.31	4.65 †	5.06 †	7.04 †	2.72	3.86 †	5.05	1.44	1.26	11	6.36	3.98
52417	2A1					1.31 ††	1.69 †	2.84 ††	0.92 ††	0.53 ††	2.42 ††	2.96 ††	1.58 ††
52435	2A1	1.13	3.78	3.93	5.68	1.93 †	2.61	3.4 †	1.32	0.55 ††	7.34	3.92 ††	2.39 ††
52436	2A1	1.06	3.54	4.29	5.7	2.37	2.89	4.32	1.73	0.83 †	8.16	5.2	3.09
52437	2A1	1.3	6.3 ††	4.9 †	8.3 †	1.33 ††	6.26 †	4.89	8.27 ††				

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Electrical conductivity 1:5 soil-water (3A1) dS/m air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10156	3A1	0.098	0.197	0.193	0.208	0.129 ††	8.59	0.0604	0.154	0.0757 ††	0.107	0.129	0.153
10173	3A1	0.0949 †	0.215	0.19	0.212	1.92 ††	104 †	1.03 ††	1.81 ††	0.0854	0.112	0.142	0.148
10181	3A1	0.101	0.225	0.19	0.248	0.164	8.73	0.0713	0.165	0.095	0.113	0.151	0.155
20204	3A1	0.108	0.235	0.208	0.229	0.168	8.28	0.078	0.168	0.091	0.11	0.145	0.152
21043	3A1	0.102	0.251 †	0.191	0.264 †	0.172	7.74	0.0836	0.163	0.1	0.14 ††	0.186 ††	0.166
21088	3A1	0.101	0.255 ††	0.181	0.244	0.199 ††	8.25	0.086	0.163	0.113 ††	0.132 †	0.165	0.168
21091	3A1	0.105	0.24	0.21	0.26 †	0.16	8.1	0.08	0.17				
21100	3A1	0.106	0.222	0.209	0.216	0.164	8.11	0.0739	0.173	0.0936	0.113	0.139	0.155
21115	3A1	0.1	0.225	0.195	0.22	0.15	8.58	0.068	0.161	0.079 ††	0.109	0.139	0.146
21138	3A1	0.108	0.218	0.199	0.223	0.166	8.44	0.071	0.163	0.097	0.113	0.145	0.16
21178	3A1									0.091	0.116	0.15	0.159
21182	3A1	0.11 †	0.23	0.2	0.23	0.16	8.47	0.065	0.164	0.092	0.11	0.15	0.15
21190	3A1	0.0937 †	0.202	0.178	0.187	0.164	8.37	0.0723	0.164	0.0994	0.132 †	0.169	0.178 †
21193	3A1	0.104	0.227	0.203	0.222	0.156	8	0.066	0.155	0.093	0.111	0.144	0.151
21196	3A1	0.1	0.21	0.18	0.18 †	0.192 ††	8.49	0.089 †	0.177	0.09	0.11	0.14	0.15
21229	3A1	0.111 †	0.262 ††	0.193	0.281 †	0.177	8.21	0.082	0.162	0.105 †	0.13	0.19 ††	0.17
21230	3A1	0.101	0.218	0.197	0.21	0.144	8.21	0.0637	0.157	0.093	0.108	0.14	0.149
21232	3A1	0.14 †	0.12 ††	0.26 ††	0.23	0.17	8.69	0.07	0.17	0.093	0.111	0.146	0.158
21234	3A1									73.3 ††	91.3 ††	131 ††	140 ††
50004	3A1	0.117 †	0.221	0.206	0.215	0.167	6.35 †	0.0784	0.173	0.088	0.091 ††	0.142	0.153

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Electrical conductivity 1:5 soil-water (3A1) dS/m air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
50005	3A1	0.108	0.219	0.191	0.225	0.161	7.95	0.0793	0.169	0.0977	0.119	0.149	0.161
50006	3A1					0.187	5.95 †	0.125 ††	0.2 ††	0.12 ††	0.14 ††	0.2 ††	0.19 ††
50007	3A1	0.116 †	0.255 ††	0.22 †	0.288 †	0.173	8.13	0.0682	0.161	0.103 †	0.127	0.164	0.172
50011	3A1	0.102	0.229	0.196	0.25	0.165	8.11	0.088 †	0.171	0.093	0.126	0.151	0.157
50012	3A1	0.101	0.24	0.189	0.276 †	0.179	7.61 †	0.0776	0.156	0.0929	0.117	0.179 †	0.16
50013	3A1	0.102	0.257 ††	0.199	0.268 †	0.181				0.094	0.117	0.169	0.156
50014	3A1	0.97 †	0.235	0.191	0.236	0.161	7.93	0.074	0.157	0.092	0.115	0.154	0.152
50017	3A1	0.102	0.214	0.212	0.218					0.092	0.111	0.135	0.154
50019	3A1	0.102	0.22	0.198	0.234	0.173	8.41	0.069	0.402 ††	0.1	0.12	0.16	0.17
50020	3A1	0.095 †	0.21	0.188	0.213	0.157	8.04	0.0771	0.165	0.09	0.109	0.136	0.145
50021	3A1	0.102	0.209	0.188	0.21	0.165	8.3	0.069	0.165	0.101	0.122	0.156	0.166
50022	3A1	0.09 †	0.23	0.2	0.23	0.15	8.08	0.07	0.15 †	0.08 ††	0.1	0.13	0.13 ††
50023	3A1	0.103	0.213	0.2	0.21	0.155	8.34	0.076	0.166	0.094	0.116	0.148	0.158
50024	3A1	0.107	0.218	0.202	0.225	0.15	0.0074 †	0.06	0.146 ††	0.078 ††	0.102	0.13	0.137
50025	3A1	0.12 †	0.22	0.192	0.214	0.175	9.33 †	0.0793	0.176	0.103 †	0.128	0.162	0.172
50027	3A1	0.099	0.218	0.201	0.216	0.162	8.37	0.071	0.16	0.097	0.116	0.149	0.155
50029	3A1	0.0866 †	0.18 ††	0.154 ††	0.213	0.127 ††	10.8 †	0.064	0.142 ††	0.0815 †	0.114	0.166	0.136 †
50030	3A1	0.105	0.216	0.2	0.215	0.155	8.16	0.067	0.16	0.091	0.108	0.141	0.15
50031	3A1	0.103	0.234	0.2	0.247	0.165	8.3	0.074	0.166	0.096	0.117	0.157	0.158
50032	3A1	0.105	0.223	0.194	0.216	0.163	8.27	0.073	0.162	0.098	0.118	0.15	0.159
50033	3A1	0.101	0.212	0.179	0.277 †	0.165	8.27	0.071	0.161	0.108 ††	0.124	0.182 †	0.168
50038	3A1	0.0861 †	0.166 ††	0.123 ††	0.131 †								
50042	3A1	0.091 †	0.161 ††	0.183	0.196	0.127 ††	7.92	0.075	0.162	0.89 ††	0.106	0.142	0.136 †
50044	3A1					0.19 †	8.5	0.077	0.17	0.09	0.11	0.15	0.15
52283	3A1					0.172	7.57 †	0.074	0.155	0.094	0.117	0.158	0.153
52334	3A1	83 †	187 ††	154 ††	198 †	0.155	8.07	0.071	0.166				
52387	3A1	0.123 †	0.267 ††	0.238 ††	0.262 †	0.196 ††	8.3	0.13 ††	0.251 ††	0.109 ††	0.158 ††	0.163	0.187 ††
52402	3A1	0.103	0.223	0.206	0.217	0.157	8.29	0.115 ††	0.175	0.096	0.119	0.155	0.161
52417	3A1					0.165	8.04	0.073	0.167	0.094	0.143 ††	0.155	0.174
52434	3A1	0.11 †	0.23	0.22 †	0.22	0.36 ††	7.81	0.18 ††	0.21 ††	0.09	0.12	0.21 ††	0.16
52435	3A1	0.119 †	0.334 ††	0.217	0.29 †	0.21 ††	9.11 †	0.1 ††	0.2 ††	0.12 ††	0.14 ††	0.18 †	0.18 †
52436	3A1	0.1	0.23	0.17 ††	0.23	0.16	7.45 †	0.07	0.16	0.118 ††	0.147 ††	0.178 †	0.194 ††
52437	3A1	0.1	0.15 ††	0.16 ††	0.18 †	0.45 ††		0.19 ††	0.22 ††	0.06 ††	0.09 ††	0.11 ††	0.12 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Soil pH, 1:5 soil-water (4A1) air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10156	4A1	5.8	7.84 ††	5.96	5.92 †	7.74	3.21	6.98	5.66 †	7.85	6.54	7.08	6.15
10166	4A1	5.84	7.99	5.86	8.05	7.68	3.14	6.77	5.58	7.6 ††	6.63	7.18	6.16
10173	4A1	5.74	8.17	5.85	8.28	7.78	3.16	7.14	5.53	7.56 ††	6.53	7.13	6.16
10181	4A1	6.04	8.36	6.07 ††	8.39	8	3.19	7.35	5.64	8.16	6.81 ††	7.42 †	6.36 ††
20204	4A1	5.95	8.23	5.84	8.19	7.88	3.17	6.6 ††	5.44	8.07	6.67	7.25	6.16
21043	4A1	5.86	8.31	5.83	8.43	8.01	3.23	7.55	5.51	8.26	6.51	6.51 ††	6.14
21088	4A1	5.93	8.23	5.84	8.27	7.91	3.15	7.18	5.48	8.02	6.5	7.17	6.14
21091	4A1	5.5 †	8	5.7 ††	8	7.7	2.9 †	6.4 ††	5.4	8.1	6.6	7.3	6.2
21100	4A1	5.88	8.25	5.9	8.21	7.66	3.14	7.34	5.48	8.06	6.51	7.23	6.12
21115	4A1	5.95	8.35	5.95	8.3	8.08	3.14	7.39	5.54	8.14	6.55	7.26	6.25 †
21138	4A1	5.92	8.32	5.98	8.46	7.94	3.15	7.43	5.54	8.28	6.67	7.38	6.22
21178	4A1									8.08	6.46	7.16	6.06
21182	4A1	6	8.3	6	8.3	8	3.14	7.71	5.71 ††	8.1	6.7	7.2	6 †
21190	4A1	5.83	7.99	5.85	8.08	7.47 ††	3.14	6.93	5.5	7.38 ††	6.52	6.91 †	6.13
21193	4A1	5.65 †	7.96	5.74 †	8.02	7.86	3.16	7.38	5.47	8.01	6.53	7.16	6.1
21196	4A1	5.72	7.92 †	5.78	7.95 †	7.7	3 †	7.1	5.4	8	6.4	7.1	6.1
21229	4A1	6.01	8.34	5.94	8.43	7.94	3.15	7.44	5.55	8.1	6.57	7.24	6.18
21230	4A1	5.85	8.27	5.85	8.36	7.92	3.1	7.32	5.48	8.15	6.58	7.26	6.16
21232	4A1	5.9	8.22	5.86	8.26	7.78	3.27 †	6.9	5.55	8.01	6.54	7.25	6.16
21234	4A1									6.36 ††	5.8 ††	6.11 ††	5.49 ††
50004	4A1	6.37 †	8.52	6.35 ††	8.43	8.01	2.81 †	7.31	5.39	8.2	6.55	7.23	6.09
50005	4A1	5.89	8.23	5.91	8.12	7.62	3.19	7.17	5.61	8.06	6.45	7.15	6.1
50006	4A1					6.95 ††	3.05 †	6.88	5.5	6.65 ††	6.35	6.75 ††	5.7 ††
50007	4A1	5.79	8.14	5.78	8.08	7.86	3.03 †	7.46	5.68 †	8.12	6.54	7.19	6.24
50011	4A1	5.92	8.34	5.88	8.41	7.88	3.21	7.33	5.55	7.95	6.57	7.2	6.17
50012	4A1	6	8.2	5.95	8.15	7.79	3.16	7.27	5.6	8.13	6.65	7.31	6.26 †
50013	4A1	5.9	7.9 †	5.9	7.9 †	7.9				8.1	6.5	7.2	6.1
50014	4A1	5.92	8.23	5.93	8.27	7.79	3.09	7.02	5.48	8.06	6.49	7.19	6.08
50017	4A1	5.94	8.38	5.92	8.46					8.33	6.67	7.41	6.25 †
50019	4A1					7.8	3.2	6.8	4.6 ††	8.15	6.65	7.3	6.2
50020	4A1	6	8.22	5.97	8.26	7.86	3.15	7.04	5.75 ††	7.97	6.6	7.16	6.21
50021	4A1	5.99	8.45	5.96	8.51	8.03	3.16	7.59	5.6	8.3	6.66	7.35	6.25 †
50022	4A1	5.8	8.1	5.8	8.2	7.9	3.2	7.4	5.5	8.2	6.6	7.3	6.1
50023	4A1	5.9	8.31	5.88	8.28	7.94	3.12	7.35	5.5	8.07	6.47	7.15	6.1
50024	4A1	5.91	8.18	5.85	8.18	7.09 ††	3.05 †	6.27 ††	4.82 ††	7.65 ††	6.53	7.02	6.03
50025	4A1	6.09	8	6.09 ††	7.94 †	7.75	3.17	6.4 ††	5.5	7.8 †	6.65	6.98 †	6.1
50027	4A1	5.97	8.18	5.89	8.27	7.9	3.17	7.48	5.59	8.09	6.56	7.21	6.16

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Soil pH, 1:5 soil-water (4A1) air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
50029	4A1	5.63 †	8.15	5.74 †	8.21	7.55 †	2.85 †	7.07	5.25 ††	7.89	6.43	7.08	6.03
50030	4A1	5.91	8.46	5.87	8.33	8.04	3.16	7.49	5.51	8.24	6.63	7.34	6.22
50031	4A1	5.9	8.3	5.9	8.3	7.9	3.2	7.4	5.5	8.1	6.5	7.2	6.1
50032	4A1	5.81	8.14	5.86	8.25	7.68	3.19	7.14	5.44	8	6.48	7.11	6.11
50033	4A1	5.64 †	8.28	5.85	8.34	7.97	3.16	7.5	5.57	8.21	6.55	7.28	6.17
50038	4A1	5.06 †	7.79 ††	5.2 ††	7.92 †	6.88 ††	2.83 †	6.18 ††	4.56 ††				
50042	4A1	6.04	8.29	6.05 ††	8.34	7.96	3.31 †	6.83	5.54	8.53 ††	7.06 ††	7.69 ††	6.65 ††
50044	4A1					7.8	3.2	7.2	5.6	8.2	6.6	7.3	6.2
52283	4A1					7.92	3.2	7.25	5.46	7.92	6.46	7.06	6 †
52334	4A1	5.72	7.89 †	5.77	7.98	7.85	3.17	7.27	5.53				
52387	4A1	5.82	8.05	5.9	8.2	7.98	3.44 †	6.99	5.43	7.2 ††	6.39	6.84 ††	6.09
52402	4A1	5.9	8.33	5.92	8.3	8.05	3.04 †	7.23	5.4	7.96	6.45	7.14	6.04
52417	4A1					6.93 ††	3.16	6.39 ††	5 ††	7.27 ††	5.83 ††	6.64 ††	5.58 ††
52434	4A1					8	3.2	7.6	5.6	8	6.5	7.4	6.3 ††
52435	4A1	5.91	8.17	5.89	8.29	7.72	3.13	7.25	5.54	7.8 †	6.42	7.05	6.01 †
52436	4A1	5.95	8.06	5.9	8.12	7.72	2.92 †	7.25	5.48	7.92	6.48	7.22	6.11
52437	4A1	5.4 †	7.8 ††	5.6 ††	7.8 †					7.8 †	6.5	7.1	6.1

Lab. Code #	Method Codes	Soil sample identification and values for 2016: pH CaCl2 Unstirred - Pooled(4B1 + 4B3)air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10166	4B1	5.04	7.34	5.45	7.55	7.07	3.11	6.26	4.85	7.14	6.07	6.66	5.51
21043	4B1									7.56	5.88	6.65	5.44
21091	4B1	4.6 †	6.8 ††	5 ††	7 †	7.1	2.9 †	5.9 †	4.8	7.7	6.2	6.9 ††	5.8 ††
21138	4B3	5.17	7.72	5.52	7.88	7.42	3.14	6.63 †	4.89	7.58	6.03	6.81	5.55
21178	4B3									7.32	5.89	6.69	5.41
21182	4B1	5.2	7.6	5.5	7.7	7.1	3.1	6.3	5 †	7.4	6	6.6	5.6
50005	4B1	5	7.51	5.39	7.53	7.07	3.15	5.91 †	4.9	7.1	5.76	6.56	5.41
50014	4B1	5	7.48	5.36	7.75	7.24	3.04	6.2	4.83	7.5	5.93	6.65	5.46
50019	4B1	5.1	7.6	5.5	7.8	7.3	3.1	6.3	4.9	6.9	6	6.7	5.5
50021	4B1	5.09	7.73	5.46	7.88	7.51	3.15	6.57 †	4.97 †	7.65	6.04	6.79	5.79 ††
50024	4B1	4.97	7.37	5.37	7.58	7.72	3.08	7.07 †	5.38 ††	7.46	6.33 ††	6.69	5.65
50027	4B1	5.07	7.54	5.4	7.68	7.23	3.15	6.63 †	4.86	7.42	5.88	6.63	5.46
50030	4B1	5.02	7.49	5.36	7.74	7.23	3.14	6.6 †	4.84	7.37	5.99	6.69	5.5
52387	4B3	4.96	7.42	5.32	7.62	7.35	3.36 †	6.3	4.79	6.5 ††	5.85	6.38 ††	5.45
52402	4B1	5.08	7.41	5.43	7.64	7.2	3 †	6.44	4.79	7.21	5.88	6.6	5.44
52417	4B3					6.84	2.89 †	6.21	4.52 ††	6.99	5.49 ††	6.3 ††	5.13 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: pH CaCl2 Stirred -Pooled (4B2 + 4B4)air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10181	4B2	5.15	7.57	5.49	7.73	7.34	3.19	6.32	4.98	7.4	6.17 ††	6.78	5.68
20204	4B2	5.15	7.54	5.23 ††	7.68	7.28	3.14	6.18	4.89	7.3	6.05	6.64	5.56
21043	4B4	5	7.62	5.38	7.79	7.42	3.2	6.65	4.85				
21088	4B2	5.04	7.58	5.38	7.75	7.32	3.13	6.41	4.84	7.49	5.98	6.67	5.53
21100	4B4	5.14	7.55	5.5	7.67	7.11 ††	3.14	6.54	4.98	7.46	6.06	6.88 †	5.71 †
21193	4B2	5.01	7.55	5.34	7.66	7.33	3.15	6.51	4.86	6.96 ††	5.61 ††	6.33 ††	5.27 ††
21196	4B4	5.17 †	7.3	5.47	7.48	7.03 ††	3.11	6.34	4.69 ††	7.5	5.8	6.59	5.37
21229	4B2	5.13	7.68	5.47	7.85	7.39	3.15	6.62	4.91	7.35	5.95	6.7	5.5
21230	4B2	5.04	7.63	5.41	7.8	7.33	3.09	6.55	4.86	7.5	5.95	6.66	5.5
21232	4B2	5.26 †	7.71	5.61 ††	7.81	7.55 ††	3.26	6.54	5.16 ††	7.45	6.03	6.71	5.55
50005	4B2	4.99	7.54	5.43	7.58	7.28	3.19	5.91 ††	4.85	7.26	5.79	6.6	5.41
50011	4B2	5.03	7.57	5.38	7.75	7.28	3.2	6.54	4.88	7.36	5.92	6.5	5.46
50012	4B4	5.05	7.45	5.45	7.65	7.08 ††	3.16	6.43	4.94	7.39	5.88	6.56	5.36
50013	4B2	4.8 †	7.4	5.3	7.6	7.1 ††				6.9 ††	6	6.5	5.6
50017	4B2	5.03	7.7	5.43	7.85					7.61	5.94	6.75	5.52
50020	4B4	5.45 †	7.72	5.63 ††	7.84	7.29	3.11	6.19	5.16 ††	7.19	5.9	6.59	5.42
50022	4B2	5	7.4	5.5	7.5	7.3	3.1	6.6	4.9	7.5	6	6.8	5.5
50023	4B2	5.12	7.72	5.38	7.78	7.46 ††	3.09	6.39	4.93	7.42	5.87	6.7	5.47
50029	4B2	4.82 †	7.22 †	5.22 ††	7.54	6.79 ††	2.86 †	6.25	4.57 ††	7.17	5.84	6.57	5.38
50044	4B2					7.3	3.2	6.3	4.9	7.5	5.9	6.6	5.5

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Water Ext Cl - Pooled (5A1 + 5A2 + 5A3) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	5A1	20.1 †	29.8	18.6	18.8 †	15	6680	13.5	27.3	6.63	14.3	17.4	23.7
21043	5A1	41.7	30.7	19	8.25	7.52	6210	8.62	25.7	5.5	8.12	12.7	14.8
21088	5A1	53.6	33.9	20.6	10.2	12.6	5590	8.5	28.5	2.5	9.7	14.7	19.3
21100	5A1	56.5	45.2 ††	33.8 ††	18.8 †	326 ††	6780 †	78.5 ††	141 ††	87.4 ††	96.2 ††	124 ††	121 ††
21115	5A2	70.9 †	84.1 ††	17.4	10.8	31.8 ††	8200 †	15.2	42 ††	8	11.1	14.5	18.8
21178	5A3									3.8	7	12	16
21182	5A1	52	32	20	9	12.5	6110	30 ††	7.7 ††	5	11	14	23
21193	5A1	47.7	236 ††	19	8.68	10.4	6700	9.31		4140 ††	4080 ††	15600 ††	4150 ††
21196	5A1	48.6	25.1	15.1	3.75 †	5.18	6060	2.28	23.8	4.58	7.95	10	13.8
21229	5A2	48	29.4	22.2	9.11	6.41	6250	5.32	27.2	9.54	15.2	17.9	20.6
21230	5A1	49.5	29.7	17.6	7.06	6.46	5820	2.26	19.5	3.38	5.86	10.5	13.5
21232	5A1	49.1	33.8	25.5 ††	15.7 †	13	5800	1.85	26.5	7.7	13.6	20.4	24.7
50004	5A1	47.5	28.6	19.9	6.9	8.77	5880	4.98	22.5	4.75	8.78	14.3	15.1
50005	5A1	39.1	30.5	19.2	22.8 †	12.1	6110	27.6 †	19.8	9.02	20.3 †	680 ††	22.3
50011	5A1	48	28.4	18.6	8.95	10.3	6250	9	24.2	6.79	9.88	13.3	16.6
50012	5A2	45	27	15	6.3	7.4	5940	7.7	23	4.4	8.3	10.4	15
50013	5A1	51.1	32.4	21.9	10.9	11.9				4.6	12.4	17.7	22.4
50014	5A1	41.5	27.1	18.6	11.7	15	6110	12.6	28	11.1 †	15	16.5	19.9
50017	5A2	30 †	20 ††	9 ††	12								
50019	5A1	5.8 †	8.3 ††	6 ††	8.2	155 ††	5500 †	160 ††	250 ††				
50020	5A2	32.6 †	27.9	18.6	15.6 †	26.6 ††	3880 †	20.5	27.5	19.8 ††	30.9 ††	21.1	28
50023	5A1	50	30	19	8.9	12	6100	8	25.5	4.6	9.9	13.6	18.2
50025	5A1	16.8 †	18.1 ††	12.6 †	9.95	6.4	11200 †	106 ††	19.8	4.87	9.98	15.1	19.8
50027	5A1	44	24 †	15	5	6	6050	15	25	8	13	16	19
50029	5A2	59.8 †	79.2 ††	18.5	39.8 †	35.6 ††	4750 †	52.9 ††	51.9 ††	65.1 ††	67 ††	64.6 ††	56.6 ††
50031	5A1	48	27	15	8	9	6270	9	25	5	9	11	16
50032	5A1	46.5	29	21.5	9.5	15.9	5700	15.5	33	7	13	16	28
50042	5A1	68 †	48 ††	36 ††	39 †	323 ††	7350 †	148 ††	151 ††	32.3 ††	104 ††	51 ††	92 ††
50044	5A2					13	6600	10	29	7	12	16	22
52283	5A1					10.7	6070	15.2	24.5				
52334	5A1	45	28.4	17.5	10.1	16.1	7640 †	13.3	56.7 ††				
52402	5A3	57.8	34.4	22	12.4	15.9	8340 †	9.34	28.1	9.7	12.4	17.6	21.3
52417	5A1					23 †	6730 †	15	30	25 ††	21 †	23	76 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Organic Carbon — W&B (6A1) % oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	6A1	0.9	0.624	3.25	1.22	0.7	1.24	0.97	1.93	0.43	2.18	1.97	3.16
21043	6A1	0.98	0.652	3.33	0.934	0.82	1.37	1.11	2.08	0.616	2.25	2.16	3.23
21100	6A1	0.786	0.531	3.06	1.26	0.818	1.28	1.06	2	0.428	2.31	2.25	3.22
21138	6A1	0.85	0.541	3.02 †	0.921	0.67	1.17	0.96	1.86	0.322	2.1	2	3.04
21178	6A1									0.27	1.86	1.77	2.8 †
21190	6A1	1.16	0.9 ††	4.51 ††	1.38 †	0.881	1.53	1.22	2.38	0.292	2.63	2.39	3.73 †
21193	6A1	0.89	0.64	3.67	1.06	0.73	1.41	1.03	1.98	0.63	2.51	2.37	3.43
21196	6A1	0.912	0.59	3.39	1.02	0.97	1.43	1.09	2.08	0.486	2.12	2.08	3.05
21229	6A1	0.844	0.568	3.42	0.967	0.682	1.27	0.94	1.91	0.364	2.07	1.98	3.13
21232	6A1	0.899	0.499	4.31 ††	0.821 †	0.09 ††	1.39	1.05	2.1	0.653	2.22	2.1	3.31
21234	6A1									0.66 †	2.75	6.63 ††	0.62 ††
50003	6A1									0.52	2.84	2.49	4.15 ††
50005	6A1	1.05	0.659	3.54	1.44 †	0.741	1.27	0.99	1.96	0.419	2.56	2.54	3.25
50006	6A1									0.83 ††	2.76	6.05 ††	4.79 ††
50007	6A1	1.05	0.73	3.76	1.25	0.768	1.44	1.12	2.19	0.39	2.73	2.58	3.68 †
50011	6A1	0.824	0.58	3.57	1.07	0.68	1.28	0.95	1.84	0.398	2.28	2.21	3.28
50012	6A1	0.817	0.611	3.39	1.04	0.712	1.38	0.993	2.1	0.314	2.32	2.31	3.48
50014	6A1	0.897	0.612	3.35	1.09	0.686	1.26	0.985	1.91	0.494	2.64	2.24	3.16
50020	6A1	1.11	0.785	3.93 †	1.25	0.713	1.37	0.99	1.89	0.937 ††	2.59	2.74	3.63
50025	6A1	0.966	0.651	3.41	1.11	0.631	0.952 †	0.762 ††	1.53 ††		2.29	1.9	3.12
50027	6A1	0.95	0.69	3.33	0.93	0.83	1.32	1.09	2.08	0.43	2.06	1.99	3.16
50029	6A1	1.11	0.79	3.51	1.13	0.76	1.28	0.89	2.07	0.36	2.1	2.13	3.03
50030	6A1	0.85	0.58	3.98 †	1.01	0.61	1.13	0.85	1.75	0.368	2.26	2.09	3.11
50031	6A1	0.94	0.76	3.49	1.11	0.97	1.62	1.11	2.24	0.63	2.41	2.52	3.29
50032	6A1	0.823	0.562	3.42	1.03	0.69	1.25	1.06	1.98	0.405	2.19	2.06	3.1
52402	6A1	0.976	0.685	3.53	1.13	0.816	1.46	1.11	2.03	0.554	2.36	2.31	3.26
52417	6A1					1.34 ††	2.12 †	1.88 ††	3.78 ††	0.606	4.46 ††	4.1 ††	6.21 ††
52434	6A1	1.16	0.7	4.76 ††	1.22	0.87	1.57	1.28 ††	2.38	0.41	2.67	2.49	3.77 †
52435	6A1	0.69	0.54	2.86 ††	0.86	0.39 ††	0.67 †	0.67 ††	0.33 ††	0.32	2.25	2.11	2.91
52436	6A1	1.04	0.68	4.01 †	1.05	0.76	1.42	1.04	2.23	0.49	2.75	2.67	4.08 ††
52437	6A1	0.98	0.63	3.78	1.07	0.8	1.54	1.09	2.31	0.46	2.69	2.42	3.59

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Total Carbon — Dumas (6B2) % oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	6B2	1.03	0.679	3.66	1.44 †	0.769 ††	1.28	0.954 ††	2.2	0.402 ††	2.77	2.09 ††	3.76
8888	6B2	1.06	0.843	3.83	1.9					0.469	2.88	2.46	3.87
10156	6B2					0.842	1.33	1.1	2.24				
10173	6B2	0.99	0.74	3.72	1.69	0.81 †	1.28	0.995 ††	2.17	0.807 ††	4.94 ††	3.7 ††	3.83
10181	6B2	1.1	0.794	4.95 ††	1.75	0.872	1.36	1.13	2.27	0.456	3.05	2.73	3.88
20204	6B2	1.01	0.74	3.86	1.65	0.877	1.3	1.1	2.23	0.458	2.66	2.46	3.77
21043	6B2	1.08	0.825	4.03	1.58	0.882	1.38	1.14	2.24	0.465	3	2.64	3.85
21100	6B2	1.11	0.805	4.13	1.78	0.885	1.37	1.12	2.25	0.47	3.17	2.79	4.21 ††
21138	6B2	1	0.743	3.43	1.66	0.83	1.3	1.07	2.15	0.46	2.81	2.44	3.74
21182	6B2	1.1	0.76	6 ††	1.7	0.87	1.35	1.12	2.41 ††	0.49	3.1	2.8	4.2 ††
21229	6B2	1.08	0.807	4.05	1.69	0.957 ††	1.6 †	1.18	1.98 ††	0.48	2.37 ††	2.02 ††	3.82
21230	6B2	1.01	0.746	4.04	1.7	1.07 ††	1.48 †	1.34 ††	2.28	0.697 ††	2.97	2.69	3.79
21232	6B2	1.18 †	0.828	3.67	1.78	0.954 ††	1.41	1.19	2.29	0.515 ††	2.81	2.31	3.9
50004	6B2	1.02	0.737	3.72	1.56	0.83	1.32	1.08	2.24	0.529 ††	2.75	2.53	3.83
50005	6B2	1.06	0.768	4.05	1.47 †	0.881	1.31	1.09	2.18	0.469	2.75	2.53	3.85
50011	6B2	1.08	0.766	3.84	1.68	0.88	1.34	1.09	2.24	0.479	2.74	2.55	3.82
50012	6B2	1.05	0.771	4.13	1.75	0.873	1.34	1.12	2.23	0.456	2.9	2.63	3.85
50014	6B2	1.05	0.76	4.17	1.75	0.875	1.32	1.11	2.32	0.44	3	2.68	4.08 ††
50017	6B2	1.04	0.782	3.93	1.64	0.862	1.33	1.11	2.19	0.481	2.86	2.46	3.93
50019	6B2	1.33 †	1.05 ††	4.59	1.93 †	1.05 ††	1.63 †	1.27 ††	2.39 †	0.455	2.66	2.49	3.72
50020	6B2	1.02	0.728	4.12	1.8	0.884	1.3	1.05	2.31	0.418 ††	2.88	2.87	3.59 ††
50021	6B2	1.03	0.71	4.4	1.7	0.803 ††	1.29	1.03 †	2.19	0.411 ††	2.68	2.47	3.76
50024	6B2	1.09	0.744	4.12	1.81	0.853	1.33	1.15	2.23	0.451	2.71	2.48	3.8
50029	6B2	1.11	0.825	4.05	1.84	0.885	1.34	1.14	2.26	0.473	3	2.66	4.04
50030	6B2	1.07	0.78	4.4	1.6	0.85	1.37	1.16	2.3	0.468	3.06	2.7	3.94
50032	6B2	1.07	0.748	4.34	1.71					0.475	2.86	2.58	3.96
50033	6B2	1.01	0.77	4.17	1.77	0.86	1.36	1.13	2.26	0.45	3.02	2.64	3.91
50039	6B2	1.08	0.78	4.06	1.77	0.85	1.35	1.13	2.25	0.48	3	2.65	3.91
52283	6B2	1.21 †	0.873 ††	3.87	1.74	0.879	1.21 †	1.02 †	2.14	0.445	2.72	2.49	3.85
52334	6B2	1.28 †	0.88 ††	4.7 †	1.9	0.97 ††	1.48 †	1.2	2.48 ††				
52387	6B2	0.939 †	0.686	3.48	1.56	0.815 †	1.21 †	1 ††	2.07 ††	0.437	2.49	2.42	3.47 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Total Organic Carbon - Pooled (6B1 + 6B3) % oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	6B3	1	0.71	3.82	1.6 †	0.788	1.26	1	1.99	0.485	2.26	2.26	3.47 †
21088	6B1	1.86 †	1.28 ††	6.2 ††	2.06 †	0.791	1.45	1.04	2.18	0.455	2.47	2.4	3.49 †
21088	6B3	1.08	0.743	3.6	1.2								
21091	6B1	0.98	0.63	2.1 ††	1.1	0.7	1.1 †	0.9 ††	1.85	0.4	1.6 ††	1.6 ††	1.7 ††
21100	6B3	1.05	0.722	4.15	1.24	0.856	1.37	1.12	2.28	0.441	2.92	2.55	3.9
21182	6B3	1	0.67	3.4	1.2	0.75	1.23 †	1.06	2.1	0.38	2.7	2.6	3.9
21182	6B1	1.1	0.72	3.5	1.2	0.9	1.6 †	1.2	2.3	0.52	2.6	2.5	3.7
21230	6B3	1.01	0.682	4.03	1.18	1.02 ††	1.48 †	1.34 ††	2.28	0.668 ††	2.97	2.63	3.78
21232	6B3	0.899 †	0.499 ††	4.31	0.821 †	0.09 ††	1.39	1.05	2.1				
50005	6B3	1.05	0.72	4.08	1.38 †	0.855	1.31	1.01	1.99	0.449	2.71	2.31	3.81
50011	6B3	1.07	0.68	3.82	1.15	0.77	1.34	1.09	1.99	0.472	2.37	2.38	3.75
50012	6B3	1.06	0.703	4.59	1.26	0.811	1.3	1.09	2.19	0.456	2.85	2.55	3.84
50013	6B3	1.1	0.64	3.94	1.04	0.81				0.37	2.1	3.8 ††	4.7 ††
50014	6B3	1.02	0.688	4.14	1.19	0.777	1.3	1.08	2.27	0.405	2.92	2.56	3.97
50014	6B1	1.21 †	0.843 ††	4.15	1.3	0.911	1.64 †	1.25	2.48	0.598 ††	2.78	2.56	4.12
50020	6B3	0.997	0.646	4.36	1.14	0.812	1.33	1.14	2.04	0.403	2.64	2.42	3.89
50022	6B1	0.96	0.64	3.43	1.05	0.68	1.32	1.01	2	0.46	2.31	2.39	3.02 ††
50023	6B3	1.06	0.73	4.21	1.33	0.84	1.36	1.12	2.29	0.5	3.06	2.75	3.96
50024	6B3	1.09	0.626	4.12	0.9 †	0.68	1.33	1.15	2.23	0.451	2.71	2.48	3.8
50030	6B1	1.04	0.7	4.49	1.2	0.73	1.36	0.99	2.05	0.44	2.61	2.46	3.62
50030	6B3	1.07	0.75	4.4	1.18	0.83	1.37	1.11	2.3				
50032	6B3	1.07	0.668	4.34	1.22					0.46	2.86	2.57	3.93
50038	6B1					1.26 ††	1.66 †	1.49 ††	2.15				
50039	6B3	1.08	0.78	4.06	1.26	0.85	1.35	1.13	2.25	0.48	3	2.65	3.91
52334	6B3	1.28 †	0.88 ††	4.7	1.8 †	0.9	1.4	1.15	2.44				
52437	6B1	1.09	0.69	3.8	1.17								

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Total N — Pooled (7A1 + 7A2) % oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
21088	7A2	0.0806	0.076	0.412 †	0.113 †	0.0703 †	0.0692	0.0811	0.169 †	0.0595	0.187	0.187	0.254 †
21091	7A1	0.073	0.079	0.44 †	0.11 †	0.092 †	0.082 †	0.098 †	0.2	0.064	0.23 †	0.25 ††	0.29
21138	7A2	0.0685	0.061	0.35	0.089	0.075	0.07	0.084	0.187	0.061	0.201	0.198	0.28
21178	7A1									0.064	0.192	0.205	0.277
21190	7A1	0.071	0.044	0.221 †	0.0825	0.0932 †	0.0649 †	0.0801 †	0.178	0.0567	0.223	0.215	0.311 †
21193	7A1	0.0997 †	0.092	0.007 ††	0.137 †	0.084	0.074	0.095 †	0.234 ††	0.057	0.238 †	0.239 †	0.339 ††
21229	7A2	0.079	0.067	0.328	0.087	0.0789	0.0766	0.0878	0.191	0.0691	0.198	0.185	0.271
21232	7A1	0.079	0.075	0.34	0.106 †	0.09 †	0.08	0.1 †	0.21 †	0.075	0.224	0.197	0.296
21234	7A1									0.05	0.17 †	0.17 †	0.25 †
50004	7A1	0.069	0.064	0.387	0.067 †	0.093 †	0.0878 †	0.0968 †	0.238 ††	0.067	0.175 †	0.18 †	0.244 †
50007	7A1									0.069	0.23 †	0.21	0.29
50012	7A2									0.0643	0.207	0.207	0.285
50014	7A2	0.073	0.06	0.35	0.091	0.074	0.071	0.086	0.197	0.059	0.234 †	0.217	0.297
50032	7A1	0.077	0.072	0.363	0.096					0.063	0.196	0.203	0.268
50038	7A1	0.0074 †	0.007 ††	0.022 ††	0.0079 †								
50044	7A1					0.076	0.078	0.088	0.17 †	0.06	0.21	0.2	0.28
52402	7A1	0.162 †	0.067	0.286 †	0.092	0.08	0.071	0.085	0.189	0.067	0.195	0.207	0.282
52417	7A1					0.0852	0.0799	0.0931	0.181	0.0684	0.227	0.221	0.294
52437	7A1	0.06	0.06	0.35	0.09	0.07 †	0.06 †	0.08 †	0.19	0.05	0.2	0.19	0.28

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Total N – Dumas (7A5) % oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	7A5	0.058	0.057	0.349 ††	0.075	0.083	0.078	0.082	0.198	0.072	0.237	0.196	0.306
8888	7A5	0.08	0.081	0.339 ††	0.118					0.071	0.236	0.213	0.296
10156	7A5					0.0869	0.0752	0.091	0.195				
10173	7A5	0.11 †	0.1 †	0.39	0.14 †	0.105 ††	0.095 †	0.1 †	0.205	0.0706	0.217	2.1 ††	0.294
10181	7A5	0.0829	0.075	0.476 ††	0.106	0.0862	0.081	0.094	0.203	0.055	0.249	0.239	0.31
20204	7A5	0.071	0.067	0.341 ††	0.09	0.087	0.084	0.096	0.199	0.063	0.211	0.211	0.293
21043	7A5	0.059	0.058	0.364	0.089	0.078	0.075	0.086	0.193	0.039 ††	0.218	0.21	0.284
21100	7A5	0.0788	0.077	0.378	0.104	0.0828	0.0816	0.0875	0.187	0.0687	0.228	0.219	0.298
21182	7A5	0.081	0.077	0.39	0.12	0.092	0.0825	0.0978	0.193	0.064	0.24	0.23	0.32
21196	7A5	0.079	0.071	0.38	0.095					0.0688	0.22	0.216	0.296
21229	7A5	0.085	0.082	0.382	0.11	0.084	0.082	0.0892	0.192	0.068	0.251	0.252	0.29
21230	7A5	0.0668	0.063	0.391	0.098	0.104 ††	0.101 †	0.119 ††	0.212 ††	0.0903 ††	0.253	0.248	0.32
50005	7A5	0.0646	0.071	0.385	0.101	0.0809	0.0777	0.0763 ††	0.186 ††	0.063	0.213	0.212	0.289
50011	7A5	0.086	0.071	0.373	0.102	0.082	0.076	0.092	0.194	0.066	0.208	0.201	0.305
50012	7A5	0.073	0.068	0.398	0.101	0.0855	0.0778	0.0921	0.199	0.0658	0.23	0.234	0.311
50013	7A5	0.062	0.052 †	0.249 ††	0.088	0.074				0.054	0.195	0.199	0.248 ††
50014	7A5	0.084	0.080	0.401	0.114	0.078	0.075	0.087	0.198	0.065	0.254	0.246	0.33 ††
50017	7A5	0.0749	0.069	0.397	0.0986	0.0821	0.077	0.0896	0.195	0.0571	0.225	0.204	0.317
50019	7A5									0.626 ††	0.206	0.21	0.29
50020	7A5	0.0842	0.081	0.411	0.111	0.0829	0.0661 †	0.0881	0.2	0.0746	0.234	0.237	0.314
50021	7A5	0.08	0.09 †	0.42	0.1	0.088	0.092 †	0.097	0.2	0.068	0.213	0.216	0.295
50023	7A5	0.067	0.06	0.387	0.09	0.08	0.083	0.093	0.2	0.07	0.233	0.233	0.307
50024	7A5	0.085	0.083	0.415	0.112	0.101 ††	0.094 †	0.107 ††	0.216 ††	0.076	0.242	0.235	0.319
50027	7A5	0.108 †	0.117 ††	0.326 ††	0.162 †	0.086	0.105 †	0.089	0.163 ††	0.065	0.18 ††	0.19	0.28
50029	7A5	0.0585	0.050 †	0.43 ††	0.0816	0.113 ††	0.0904 †	0.098	0.196	0.0442 ††	0.204	0.204	0.294
50030	7A5	0.088	0.084	0.386	0.117	0.086	0.081	0.098	0.196	0.053	0.233	0.225	0.3
50031	7A5	0.075	0.072	0.391	0.109	0.087	0.077	0.089	0.18 ††	0.061	0.218	0.202	0.286
50033	7A5	0.073	0.07	0.398	0.103	0.081	0.076	0.09	0.196	0.06	0.233	0.223	0.302
50039	7A5	0.08	0.07	0.39	0.1	0.079	0.076	0.09	0.199	0.063	0.22	0.218	0.302
52283	7A5	0.137 †	0.081	0.385	0.088	0.08	0.078	0.118 ††	0.216 ††	0.067	0.207	0.209	0.296

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Water Soluble Nitrate N - Pooled (7B1 +7B2) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	7B1	14.6	2.6	46.3	2.79	12.1	0.519	3.57 ††	34.9	0.83	0.1	8.46 †	0.45
21091	7B1	13	2	61	3	10	0.5	2	36			6	
21115	7B1	15.2	2.62	53.4	2.53	11.6	0.21	2	38.1	0.59	0.06	5.26	0.11
21178	7B1									0.5	0.05	1.15 ††	0.05
21182	7B1					12	0.11	2.1	2 ††	0.64	0.07	5.1	0.16
21196	7B1	15	3	54	3	12	0.3	2	36	0.79	0.05	5.9	0.05
21232	7B1					12.1	0.945	3.05	36.8				
50004	7B1	15.4	2.43	58.5	2.54	10.8	0.05	1.71	34.1	0.609	0.164	6.24	0.234
50005	7B1	17.8	2.51	58.1	2.97	10.8	0.388	1.21	36.7	0.698	0.48	5.98	0.488
50013	7B1	13.3	2.1	50.6	2.5	10.8				0.6		8.1 †	0.018
50014	7B1	14	2.56	56.6	2.91	12.3	0.62	2.4	37.8	0.69	0.33	6.48	0.53
50020	7B1	14.9	1.89	54.5	1.73 †	13.6 ††	1.86 †	3.59 ††	37.9	1.97 ††	1.74 ††	8.4 †	1.22 †
50025	7B1	16.8	3.5	67.5 ††	3.78	12.5	1.93 †	3.5 ††	34.2	2.7 ††	2.21 ††	9 †	2.34 ††
50029	7B1	12.1	2.21	42.5 ††	2.02	9.34	0.1	1.74	26.2 ††	1.18 ††	0.2	5.49	0.2
50031	7B1	14	2.2	51	2.4	11.1	0.5	1.9	32.4	0.5	0.1	4.5	0.1
50032	7B1	16.3	2.65	58.5	2.8	11	0.65	2.1	31	1.3 ††	0.85 †	7.7 †	0.73
50042	7B1	17	11 ††	12 ††	12 †	16 ††	149 †	42 ††	22 ††	1850 ††	472 ††	309 ††	229 ††
50044	7B1					10		1.5	35	0.8	0.3	6	
52334	7B1	18.3 †	5.4 ††	56.6	6.3 †	11.4			31.6				
52402	7B2	13.9	0.759 ††	58.6	0.826 †	11.1	4.94 †	1.27	34.4	0.607	0.654 †	6.03	0.485

Lab. Code #	Method Codes	Soil sample identification and values for 2016: KCl Extractable Nitrate N — autocolour (7C2) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	7C2	14.9	2.33	55.7	2.47	11.9	0.001	2.17	35.8	0.745	0.078	6.73	0.141
8888	7C2	15.6	2.73	63	2.52	10.1	1.17	1.63	34.1	0.663	0.443	5.42	0.37
10173	7C2	19 †	4.04 ††	63.6	4.55 †	16 ††		2.8	45 ††	0.202 †	0.25	6	0.258
10181	7C2	15.1	2.16	48.7 ††	2.22	10.6	0.0019	1.88	33.8	0.68	0.15	5.71	0.06
21043	7C2	16	2.73	57	3.23	13.5 †	0.001	2.52	45.2 ††	0.267 †	0.393	6.5	0.351
21088	7C2	12.6 †	3.26	43.4 ††	3.07	10.9	0.52	2.47	30.8 †	0.74	0.05	6.34	0.17
21100	7C2	15.7	2.89	59	3.01	9.73 †	0.337	2.51	32.1	0.761	0.27	5.78	0.294
21138	7C2	16	2.25	53.8	2.25					0.6	0.6	6	0.45
21182	7C2	17	3.4	63	3.5	12	0.71	2.7	40 ††	0.64			
21193	7C2	14.4	2.73	51.9	3.31	11.4	0.82	3.11 †	33.3	1.3 ††	0.34	7.09	0.39
21229	7C2	15.7	2.68	58.2	3.17	11.1	0.57	2.09	37.6 †	0.93 †	0.32	6.45	0.5
21230	7C2	14	3.7	53.5	0.282 †	9.6 †	0.776	4.4 ††	34.5	1.45 ††	0.886 ††	4.67 ††	0.756
21232	7C2	16.7	3.4	57	4.02	12.2	0.716	2.7	36	2.13 ††	1.07 ††	8.29 ††	1.77 ††
50004	7C2	14.1	2.07	55.1	1.88	12.8 †	0.02	1.82	39.4 †	1.05 †	0.242	6.75	0.342
50005	7C2	17.6 †	2.48	57	2.94	11.1	0.391	1.25	36.5	0.712	0.484	6.22	0.501
50011	7C2	14.6	2.49	55.3	2.65	11.7	0.57	2.07	35.7	0.681	0.279	6.27	0.318
50012	7C2	15	2.5	58	2.7	1.16 ††	0.1	0.17 ††	3.4 ††	0.536	0.0252	6.3	0.0229
50014	7C2	14.9	2.31	59.4	2.34	10.4	0.01	0.37 ††	37.6 †	0.131 †	0.187	6.04	0.01
50017	7C2	16.4	2.95	60.8	3.02					1.15 †	0.64	6.63	0.51
50019	7C2	16.8	4.38 ††	59.4	4.41 †	2.88 ††	43.5 †	0.89 †	0.54 ††	1.8 ††	0.1	5.45	0.05
50020	7C2	14.4	2.92	59	3.37	13 †	3.28 †	4.04 ††	33.1	4.55 ††	3.57 ††	10.5 ††	3.53 ††
50021	7C2	15.2	2.75	57.4	2.86	11.7	0.56	2.12	36.7	0.65	0.15	6.35	0.22
50023	7C2	16	2.9	59	3.1	11	0.4	2	35.2	0.49	0.1	7.05	0.025
50024	7C2	16	4.1 ††	66.9 ††	3.6					0.74	0.17	6.36	0.2
50027	7C2	15.3	2.8	56.3	2.7	11.7	0.5	2.1	34.4	0.6	0.01	6.2	0.1
50030	7C2	15	2.4	60.8		11.2	0.6	2.2	34.6	0.9 †	0.4	7.2	0.3
50031	7C2	15.7	2.51	61.9	2.46	11	0.1	1.16	33.2	0.506	0.66	4.99 ††	0.73
50033	7C2	14.1	2.3	59.7	2.5	10.9	0.06	1.78	33.8	0.59	0.03	5.93	0.07

Lab. Code #	Method Codes	Soil sample identification and values for 2016: KCl Ext. Ammonium N – autocolour (7C2)mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	7C2	9.1	5.9	45.4	4.5	4.75	35.8	2.95	24.6	7.05 †	26.6	17.4	54.3
8888	7C2	8.42	5.61	42.5	6.9	5.3	32.1	5.38	22.8 †	5.76	31.8	20.3	59.7
10173	7C2	8.85	6.22	45.7	6.19	6.4	40	7.1	27	7.4 ††	31	20	59
10181	7C2	9.84	5.44	46.7	7.15	6.07	38.2	6.51	26.5	5.3	33.7	19.6	68.1
20204	7C2	6.4 †	4.85	21.6 ††	2.74 †	4.76	36.7	9.18	28.2	4.76	35.1	15 †	49.6
21043	7C2	8.96	5.69	51	6.53	6.36	40.7	6.61	30.9	5.11	31.5	20	61.7
21088	7C2	8.17	5.34	45.8	6.47	7.7 †	34.8	7.48	27.4	6.27	28.4	19.5	56.1
21100	7C2	11.2 †	12.2 ††	52.4	8.74	8.05 ††	39.1	7.39	26.8	4.74	31.1	19.7	56.8
21138	7C2	9.3	5.5	49.6	6.4					5.18	29.7	19.8	56.1
21178	7C2									5.9	26	18	49
21182	7C2	14 †	10 ††	57	13 †	5.3	34	5.7	26				
21193	7C2	8.64	5.66	49.8	7.31	6.64	41	7.06	30.9	5.41	29.9	20.7	62.2
21196	7C2	8.33	5.56	45	7.51	5.48	39.7	5.77	29.6	6.44	28.5	22.4	50.5
21229	7C2	9.26	5.52	46.6	6.26	5.71	37	4.24	27.2	5.2	28.5	16.9	50.9
21230	7C2	12.6 †	8.33 ††	55.7	11.2 †	10.5 ††	46.7 †	10.2 ††	31.7 †	7.69 ††	33.7	23.6	62.6
21232	7C2	10.5 †	5.87	59.1 ††	4.13	6.18	44.9	5.16	31.5 †	6.5	28	16	61.5
50004	7C2	8.68	5.09	46	7.38	6.4	38.5	6.54	28.2	5.81	25.5	18.7	39.9 ††
50005	7C2	8.26	4.83	43.8	6.41	4.78	35.8	4.61	27.9	5.02	29	18	50.5
50011	7C2	9.05	5.08	43.8	5.61	4.78	36.4	5.07	27.8	4.83	26.6	17.4	49.6
50012	7C2	9	5.9	50	8	0.622 ††	3.8 †	0.605 ††	2.6 ††	5.5	29	20	60
50014	7C2	9.2	5.7	48.9	8.36	6.6	41.1	7.64	27.9	5.86	32.3	21	60.6
50017	7C2	8.66	4.72	48.8	6.73					4.23	32.9	20.1	64.7
50019	7C2					5.34	23.5 †			4.1	18 ††	16.6	37.2 ††
50020	7C2	15 †	11.6 ††	50.8	11 †	9.53 ††	44	11 ††	36.8 ††	5.12	29.3	18.4	57.4
50021	7C2	8.85	5.66	44.1	6.8	6.31	37.5	6.28	25.3	6.05	24.8	18.5	48.7
50023	7C2	9.9	5.8	52	7.8	5.9	38.6	6	27.4	5.7	33.5	21	64.5
50024	7C2	7.4 †	4.8	34.7 ††	5.2					7.19 †	32.8	23.4	59.2
50027	7C2	8	5	45.5	6.1	5.8	37.1	5.4	26.2	5.4	29	18.9	57.7
50029	7C2	1.45 †	1.14 ††	12.1 ††	1.37 †	1.29 ††	16.9 †	1.27 ††	6.66 ††	1.39 ††	3.23 ††	1.89 ††	9.08 ††
50030	7C2	8.4	5.4	49.3		5.5	39.5	4.8	27	5.2	30.3	19.2	58.4
50031	7C2	10.4 †	6.18	53.5	8.57	8.4 ††	42.9	7.8	29.2	6.07	32.5	21.2	60.6
50032	7C2	9.16	4.63	45.9	5.84	5.87	39.5	4.2	29.2	5.3	50 ††	17.9	53.5
50033	7C2	8.5	5.2	52.3	5.6	5.3	33.5	6	25.2	6.4	37.4 †	24 †	68.6
52334	7C2	10.6 †	7 †	50.8	9.9 †	6.93	38.7	6.17	26.6				

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Total P - Pooled % oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10156	Not Specified	0.02	0.020	0.125	0.0203		0.0335	0.0669	0.0481	0.0367	0.149	0.0442	0.131
10181	Not Specified	0.02	0.018	0.138	0.0198	0.0279	0.0361	0.103	0.0526				
20204	Not Specified	0.02	0.02	0.128	0.02	0.026	0.0258 †	0.084	0.051	0.035	0.166	0.044	0.122
21043	Not Specified	0.02	0.021	0.125	0.02	0.026	0.035	0.095	0.049	0.035	0.181	0.048	0.142
21088	Not Specified	0.02	0.017	0.123	0.0209	0.0259	0.0349	0.0796	0.048	0.0386	0.118	0.0419	0.12
21091	Not Specified	0.02	0.026 ††	0.22 ††	0.024	0.045 ††	0.047 †	0.109	0.068 ††	0.053 ††	0.22 †	0.072 ††	0.19 ††
21100	Not Specified	0.01	0.016	0.122	0.0164	0.019	0.0338	0.0877	0.0408	0.0379	0.175	0.0497	0.14
21138	Not Specified	0.02	0.016	0.124	0.0167	0.0248	0.0324	0.0913	0.049	0.0373	0.153	0.045	0.129
21178	Not Specified									0.0379	0.132	0.044	0.13
21182	Not Specified	0.02	0.02	0.16 ††	0.019	0.0454 ††	0.0506 †	0.104	0.0616 ††	0.043 †	0.16	0.046	0.15
21193	Not Specified									0.038	0.172	0.498 ††	0.147
21196	Not Specified									0.037	0.172	0.05	0.145
21229	Not Specified	0.01	0.016	0.102 †	0.0169	0.0245	0.0333	0.0838	0.0471	0.0312 †	0.15	0.0418	0.128
21230	Not Specified	0.02	0.020	0.13	0.0199	0.0315	0.0395	0.113	0.0565	0.00293 ††	0.011 ††	0.00424 ††	0.00429 ††
21232	Not Specified	0.02	0.025 †	0.148 ††	0.0239	0.0297	0.0379	0.0956	0.0542	0.04	0.174	0.0526	0.142
50004	Not Specified	0.01	0.010 ††	0.073 ††	0.0102 †	0.0283	0.0366	0.0907	0.0556	0.0384	0.19	0.0512	0.146
50005	Not Specified	0.02	0.016	0.117	0.0134	0.0224	0.0333	0.0549 ††	0.0463	0.0349	0.137	0.0381	0.135
50011	Not Specified	0.02	0.016	0.121	0.0161	0.0239	0.0347	0.0791	0.0531	0.036	0.164	0.041	0.143
50012	Not Specified	0.01	0.013	0.122	0.0123	0.0225	0.0328	0.103	0.0478	0.0329	0.163	0.0402	0.138
50013	Not Specified	0.02	0.014	0.091 ††	0.0147	0.0222				0.0283 ††	0.118	0.0431	0.106 †
50017	Not Specified	0.01	0.016	0.103 †	0.016					0.0323	0.151	0.121 ††	0.121
50019	Not Specified									0.273 ††	0.124	0.039	0.119
50020	Not Specified	0.01	0.025 †	0.114	0.0113 †	0.025	0.0354	0.0956	0.0449	0.043 †	0.172	0.0513	0.141
50021	Not Specified	0.02	0.02	0.127	0.019								
50024	Not Specified	0.02	0.019	0.117	0.0192					0.0339	0.133	0.0434	0.115
50027	Not Specified	0.02	0.017	0.118	0.0179	0.0237	0.0383	0.0992	0.0472	0.0377	0.151	0.0478	0.128
50031	Not Specified	0.02	0.021	0.136	0.021	0.031	0.038	0.1	0.052	0.037	0.179	0.047	0.145
50044	Not Specified					0.024				0.036	0.019 ††	0.051	
52283	Not Specified					0.028	0.041	0.109	0.091 ††				
52402	Not Specified	0.02	0.017	0.173 ††	0.018	0.023	0.039	0.111	0.042	0.045 ††	0.113 †	0.05	0.13
52417	Not Specified					0.0268	0.036	0.108	0.0489	0.0378	0.187	0.0501	0.152

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Colwell Extractable P — Pooled (9B1 + 9B2) mg/kg air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	9B1	29 †	18.4	42.4 †	5.2	26	53.8	42.4	30.3	5.76	167	46.5	158
21043	9B2	18.4	16.9	50.4	4.66	20.5	49.8	42.1	34.5	3.01	163	44	150
21088	9B1	17.8	16.6	66.4 ††	3.6	22.9	51.4	47	37.3	2.1	185	52.4	174
21100	9B1	20.7	16.9	46.9	6.12	28.7	54.2	55.2	42.4	6.8	178	50.7	166
21115	9B2	15.7	17.2	53.4	4.78	18	44.9	37.1	29.2	0.613 ††	50.4 ††	17.6 ††	48.7 ††
21138	9B1	18.4	17.2	54.5	4.32	24.6	51.6	44.4	36.7	4.6	180	47.4	583 ††
21178	9B1									4.92	146	45.9	134
21182	9B1	21	19	53	4	24.5	47	45.2	30.4		160	51	150
21193	9B1	17.4	14.6 ††	55.3	0.95	20.1	49	45.5	35.2	0.301 ††	222 ††	49.5	191
21196	9B2	13.8	12.8 ††	50.7	0.54 †	19.3	45.6	40.5	31.4	2.15	179	43.4	161
21229	9B2	17.7	15	50	5.96	21.3	52.4	39.1	31.2	4.56	155	35.6	145
21230	9B1	30.3 †	20.6	108 ††	9.11 †	25.9	48.5	68.2 ††	37.7	5.46	169	47.3	155
21232	9B1	16.5	18.1	60.3	8.24	28.3	67.5 †	51.6	41.5	4.73	131 †	42	118
50005	9B1	6.49 †	18.7	58.2	1.58	24.4	57.2	46.8	17.2 ††	5.01	170	49	145
50011	9B1	20	18.7	57.9	4.15	26.2	56.8	48.3	41	5	181	45.5	165
50012	9B2	17	19	51	7.3	29	58	53	39	3.5	145	43	131
50013	9B1	19.5	17.2	53	0.01 †	24				8	178	44	166
50014	9B2	18.4	13.9 ††	47.8	4.6	19.8	44.6	40.5	32.5	8.5	183	52.3	152
50017	9B1	17.7	20.4	56.3	6.6					3.5	174	56.1	162
50019	9B1	20.2	18.3	49.4	6.2	29.1	55.7	51.3	42.4	6.2	163	26 ††	152
50020	9B1	17.2	14.3 ††	54	6	19.3	48.6	38.5	32.3	2.71	125 ††	43	113
50023	9B1	19	21	54	8.3	29	58	53	41	4	179	51	164
50024	9B1					30.6	66 †	64.9 ††	48.3				
50025	9B1	16	16	34 ††	4	21	34 †	39.7	26.3	3	105 ††	36.2	103
50027	9B2	16.1	17.8	51.2	4.4	24.8	52.5	46.5	34	2.5	159	46.2	142
50029	9B2	20.5	17.9	56.3	8.12	21.6	45.5	39.5	27.6	4.92	177	49.2	158
50030	9B1	16.1	17.2	53.2	4.6	22.8	51.5	46.3	38.1	4.7	160	45.5	140
50031	9B1	21.8	19.5	67.4 ††	5.5	24	54	46	37	5	183	50	116
50032	9B1	19	18.8	57.3	2.95	28.5	57.5	45	40.5	7.4	151	41	132
50045	9B1	18.3	16.9	62.6	4.1	22	44	43	31				
52283	9B1	22	18.5	62.4	7.83	25.5	48.8	52.6	60.7 ††	5.41	169	57.2	112
52402	9B1	22.4	20.3	38.3 ††	6.56	11 ††	44.7	32.8	24.9	0.52 ††	139	39.2	131

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Olsen Extractable P — Pooled (9C1 + 9C2) mg/kg air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
8888	9C2	7.11	7.44	12.7	2.4	9.31	18.4	18.6	11.9	1.13	48.3	17.5	47.9
10156	9C1					11.3	21.1	18.2	13.1	0.339	49.8	16.2	44.4
10173	9C2	5.97	6.46	11.1	1.4	9	23 †	18	12	2	46	17	45
10181	9C2	7.84	7.98	13.7	1.9	10.7	16.9	18.5	14.2				
21043	9C2	6.11	6.5	10.9	1.31	9.35	17.7	16.6	12	1.51	45.9	17.3	43.5
21100	9C1	7.02	6.36	10.9	0.886	12	16.5	23.2	14.1	0.915	45.4	18.4	40.7
21115	9C2	6	6.38	10.5	1.36	6.87	12.1 †	13.2	8.86	1.87	66.1 ††	25.8 ††	67.2 ††
21178	9C1									1.69	41.3	17.1	38.2
21190	9C1	6.4	7.2	11.4	1.6	8.54	19.4	15.9	13				
21196	9C2	6.66	6.94	14.2	1.41					0.96	44.8	15.8	41.9
21229	9C2	8.7	7.69	14.1	1.22	8.78	15.9	15.8	9.74	1.39	43.6	15.8	40.1
21232	9C1	8.5	8.29	14.3	2.01	9.92	18.1	18.9	12.8	1.92	40.5	17.4	39.7
50005	9C1	5.7	7.66	13.3	0.446	10.2	16.9	23.4	10.5	1.63	49.2	22.5 ††	43.4
50007	9C1	8.71	9.15	16.4	1.73	11.6	8.51 †	20.7	11.4	0.98	51.5	18.7	46.4
50011	9C1	7.84	7.05	13.2	1.17	10.9	17.4	16.6	11.8	2.1	48.1	17	47.1
50013	9C1	8.7	8	10.4	0.01 †	11.3				2	40.6	17.5	39.6
50017	9C2	6.24	7.33	11.1	1.48					1.3	39	18	40.5
50019	9C1									2	43	19	42
50020	9C1	5.11	4.35 ††	9.62	1.03	9.47	14.3	24	8.05 †	1.51	35.3	14.6 †	34.5
50023	9C1	7.2	8.3	12	2.4	11.5	18.5	21	13.3	1.3	39.9	18	38.9
50027	9C2	7.2	7.4	13.5	1.5	8.5	17.3	17.6	11.2	0.9	44.7	17.1	42.4
50029	9C2	10.4 †	7.66	15.6	2.81 †	8.79	17	15.8	13	1.8	49.9	18.5	49.7
50031	9C1									1.5	48	18	45
50033	9C2	6.7	6.5	11.5	1.2	5.1 ††	8.1 †	9 ††	5.9 ††	1.72	43.1	17	42.8
50044	9C2					14	14	26	13		87 ††	39 ††	77 ††
52402	9C1	6.66	6.72	11.3	1.95	7.11	11.8 †	16.1	10	0.44	33.9	13 ††	28.8 ††
52417	9C2					21.1 ††	30.2 †	35.6 ††	38.3 ††	7.79 ††	62.2 ††	38.8 ††	58.3 ††
52434	9C1	7.41	8.21	18.7 ††	1.81	14.6	22.5 †	21.9	15.9 †	0.82	12.1 ††	8.42 ††	15.6 ††
52435	9C1	15.4 †	10.5 ††	6.92 ††	0.7	11.3	31.8 †	23.9	19.6 ††	3.61 ††	62.2 ††	21.9 ††	60.6 ††
52436	9C1	13.7 †	11.3 ††	22.9 ††	3.34 †	5.85	6.74 †	1.27 ††	9.38	0.92	38.7	15.6	43.7

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Bray-1 Extractable P — Pooled (9E1 + 9E2) mg/kg air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10156	9E1					8.69	29.3	18.1	18.3	116 ††	1390 ††	401 ††	1220 ††
10166	9E1	12.3	3.08	4.5	0.3	10.1	36.9	11.7 †	21.4	1.28	23.4	19.2	77.5
20204	9E1	12.7	5.8	5.83	1 †	10.5	42.8	14.9	23	1.38	32.2	15.2	83.9
21100	9E1	10.8	7.07	4.22	0.391	10.6	12.8 †	45.3 ††	20.7	1.24	20.4	13.2	69
21178	9E1									1.65	27	15.2	62.9
21229	9E2	13.8	7.86	4.89	0.15	8.66	43.9	14.4	21.1	1.57	19.4	10.6	67.1
50003	9E2									45.1 ††	53.7 ††	14.7	135 ††
50005	9E1	8.33 †	5.88	4.62	1.42 †	10.9	40.3	18.9	14.4	1.75	30.7	21.9	90.1
50007	9E1	12.5	5.64	2.72	0.16	12.1	35.5	16.8	26.7	1.04	16.7	12.2	74.2
50012	9E2	13	5.8	3.1	0.404	11	40.2	20	23	1.3	24	15	76
50013	9E1	14.9	6.8	5.5	0.17	6.2 †				1.9	23.3	12.2	66.8
50019	9E1					9.51	46.7	19.7	20				
50020	9E1	41.7 †	35.4 ††	32.5 ††	19.5 †	15.5 ††	54.4	24	37.1 ††	2.14	21	12	56.1
50021	9E1	13.3	7.85	6.39	0.23					1.69	24.8	17.1	94.9
50022	9E1	14	5	5		9	45	19	26	1	19	11	76
52402	9E1	12.9	3.35	2.83	0.1	9.91	42.9	14.4	25.2	0.1 ††	20.8	12	73.9
52417	9E2					11.5	48	18	29.5	1.55	16.5	15.9	83.2
52435	9E1	10.3	9.04	19.7 ††	3.02 †	13.8	49.8	25.7 †	25.1	2.25	32.6	18.4	74.5
52436	9E1	14.3	5.08	8.56 †	0.66	13.5	39.4	19.3	28.9	1.81	19	14.6	79.9
52437	9E1	22 †	23 ††	22 ††	2.08 †					63.6 ††	76.3 ††	35.5 ††	132 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Acid Extractable P — Pooled (9G1 + 9G2) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	9G1	45.1 †	26.9	93.2	6.15	37.7	63.6	341	48.1	132	220	33.5 †	292
21100	9G2	29	29.3	117	8.5	30	65.2	417	42	124	183	47.1	241
21196	9G2	16.4	19.7	69	0.95					132	200	45.2	269
21229	9G2	22.6	21	73.6	1.74	30	66.2	254	58	137	207	44.9	328
21232	9G2									140	224	44.2	308
50014	9G2	27.6	35.1	150	13.3 †	42.3	67.9	416	48	143	243	50.4	310
50020	9G1	15.3	14.5	87.4	0.375	28.6	56.5	563 ††	38.9	128	193	34.5 †	254
50025	9G1	25	25	97	3.33	38.7	69.3	451	47.3	136	217	45.2	298
50027	9G2	24.3	23.1	91.9	2.7	35.8	62.5	384	53.4	127	205	54.6 †	286
50029	9G2	21.1	17.5	64.2	2.88	30.9	58.1	376	44.1	114	185	38.7	265
50031	9G2	27	24	99	2.5	34	65	395	42	137	240	47	328
50032	9G1	31.7	30	115	7.15	36.6	65.7	314	48	152	244	67 ††	309

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Phosphorus buffer index - Colwell (9I2a + 9I2b + 9I2c) L/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	9I2a	58.7	130	829	259	25.2 ††	236	100	105	57.1 †	594	147	273
21088	9I2a	52.7	126	827	243	64	194	85.7	91.7	46.3	588	137	259
21100	9I2a	54.8	131	1030	257	78.2	224	105	102	48.3	643	147	262
21138	9I2a	52	125	983	250	67.8	204	89.5	96.8	46.8	650	135	255
21193	9I2a	54	131	639 ††	253	76	244	107	106	36 ††	641	221 ††	258
21196	9I2b	49	123	936	242	79	257	108	113	221 ††	171 ††	549 ††	75 ††
21229	9I2a	46.4	129	884	243	73	237	97	99.8	52.9	627	149	255
50005	9I2a	47.8	132	965	251	70.7	222	92.1	89.7	52.7	640	160	262
50011	9I2a	53.5	132	891	269	73.5	266	112	118 ††	49.4	736 †	159	280
50012	9I2a	49.7	125	864	243	68.1	189	92.4	95.6	48	558	137	224
50014	9I2b	50	122	906	240	70	199	90	95	50	616	142	251
50017	9I2a	56.5	134	973	260					38.2 †	768 ††	153	322 ††
50019	9I2a	48	120	1140	241	56.3	169	75.9	81.6	47.5	647	143	280
50020	9I2a	58.8	137	1070	254	62.4	166	82.1	89.8	37.3 ††	558	128	213
50025	9I2a	78 †	144	804	241	67.4	223	94.3	96	46.1	550	140	227
50027	9I2b	57	133	927	272	74	212	95	95	51	586	140	241

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Phosphorus buffer index - Colwell (9I2a + 9I2b + 9I2c) L/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
50029	9I2a	55.6	127	872	249	70	215	91	93.5	44.3	602	135	228
50030	9I2a	44	141	795	241	70	198	107	108	44	573	165 †	239
50031	9I2a	53.3	126	1180 ††	257	63	182	81	86	47.4	586	140	238
50032	9I2a	59	136	918	283 †	80	246	111	111	50	511	112 ††	231
50045	9I2a	57	131	770	257	65	233	98	98				
52402	9I2b	44.5	120	752	231	60.7	244	83.5	87.4	70.9 ††	495	125	210

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Phosphorus buffer index - Unadj (9I4a + 9I4b + 9I4c) L/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
21088	9I4b	50	123	774	242	59.6	180	76.4	84.1	45.9	488	125	209
21100	9I4b	51.5	127	984	255	70.5	204	90.9	91.2	48.5	539	135	214
21178	9I4c									5.4 ††	29.2 ††	13.9 ††	17.3 ††
21193	9I4a					72	231	99	99				
21196	9I4b	46	120	890	242	76	244	100	107	215 ††	127 ††	514 ††	44 ††
21232	9I4a	51.5	127	648 ††	252	62.1	220	80.7	80.7	47.5	489	122	180
50005	9I4a	46.7	128	911	251	66.3	207	83.3	86.4	51.7	544	149	217
50011	9I4c	47.5	126	804	256	67.7	237	90.8	99.5	48.6	620 †	149	232
50014	9I4b	47	119	864	239	66	188	82	89	48	518	131	210
50017	9I4a	53.4	129	919	258					37.6 ††	651 ††	141	270 ††
50019	9I4a	45	116	1090 ††	242	56.7	169	77	82				
50025	9I4a	61.6 †	130	821	243	65.4	215	86.6	90.8	44.4	508	132	200
50027	9I4b	54	130	878	271	69	198	86	88	50	508	130	204
50029	9I4a	52	123	825	247	66.5	202	83.4	88.2	43.4	508	125	188
50031	9I4a	49.5	122	1100 ††	255								
50032	9I4a	56	130	865	281 †	75	231	104 ††	106	48	442	103 †	195
50045	9I4a	54	127	724	256	60	220	88	91				

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Phosphate Extractable S – Pooled (10B1 + 10B2 + 10B3) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
10173	10B3	15	14 ††	93	20	16	8810 †	20 ††	32	10	72	23	44
21196	10B3	14.7	11	104	19.6					9.41	77.8	24.8	54.4
21229	10B1	13.3	10.2	98.8	17	11.8	7040	10.3	34.5	8.01	71.7	22.3	45.4
21232	10B1									7.76	73.8	22	47.6
21232	10B3	13.9	9.92	96.1	17.5	11.8	7960	11.4	35				
50014	10B3	14	10.6	102	18.3	13	7380	12.4	36.6	9.06	77.6	23.7	52
50020	10B3									4.93	29.4 ††	9.13 ††	23.3 ††
50020	10B3	14.3	10.8	55.5 ††	13.5	9	5370 †	6.83	19.8 ††				
50025	10B3	13.7	10.5	93.1	18.5	12.4	6570	11.1	35.2	7.09	70.2	20.8	45.6
50027	10B3	12.3	10.1	94.6	16.3	11.9	6740	12.8	36.2	8.8	80.8	24.5	51.1
50029	10B3	13.1	10.9	93.6	17.9	10.6	6680	8.79	28.6	10.2	75.5	20.9	44
50032	10B1	10.5 †	20.5 ††	90	10 †	4.9 ††	6900	31.7 ††	3 ††	23 ††	72	20	6.6 ††
50045	10B3	18 †	14 ††	73 ††	20	14.1	6900	10.3	33.9				

Lab. Code #	Method Codes	Soil sample identification and values for 2016: KCl_{40} Extractable S (10D1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10166	10D1	21.4 †	14.4 ††	68.1 ††	9.01	19.9 ††	8820 †	11.6	39.6 ††	18.3 ††	55.6	34.3 ††	49.3
20204	10D1	11.7	7.43	34.9	10.4	9.13	6460	11	15.5	7.4	36.8	15.9	28.4
21043	10D1	11.7	7.92	43.3	10.9	8.67	5880 †	6.13	22	6.32	36.3	14.9	27.9
21088	10D1	14.2	8.5	55.4	12.7	11.4 †	6950	8	27.5	7.7	49.3	17.9	36.7
21100	10D1	13	7.33	67.1 ††	12.3	105 ††	5960 †	5.57	26.3	6.08	62.4	14.9	38.2
21138	10D1									7.1	41.8	17.6	31.9
21178	10D1									8.2	47	19	34
21196	10D1	13	10.2	41.5	10.8	9.88 †	5480 †	12.1	24.8	6.91	35.5	15.5	30.1
21229	10D1	11.3	7.58	41.4	10.7	9.05	6990	7.71	20.3	6.59	36.4	16	28.5
21232	10D1	13.9	9	50.5	12.7	10.1 †	7570 †	8.77	27.4	7.49	44.1	18	34.5
50005	10D1	12.7	8.8	44.6	12.6	9	6710	7.61	21.4	6.77	40.6	15.5	30.8
50011	10D1	11.4	8.16	47.3	10.8	8.99	6750	6.14	21	6.7	31.1	15.8	28.9
50012	10D1	13	9.6	46	14	8.7	5680 †	30 ††	25	7	36	17	28
50013	10D1									6.6	38	16	
50017	10D1	13.6	9.46	50.7	13.2					8.98 †	43.9	17.9	33.9
50020	10D1	15.7 †	10.6	49.1	15.8	12.2 ††	7010	10	26.3				
50020	10D1									3.14 ††	48.3	20.1	40.6
50024	10D1									10.9 ††	50.8	20.3	35.8
50027	10D1	12.1	6.1	45.2	7.4	8.9	6410	2	26.8	8.4	42.7	19	31.6
50038	10D1	20.8 †	12.6 ††	65.8 ††	11.2								
50045	10D1	12	8.33	45.2	14.4	26.6 ††	6860	11.6	23.2				
52283	10D1	13.7	9.75	93.9 ††	15.1	9.4	6990	15.1 †	32.5	7.94	73.9 ††	19.5	45.8
52402	10D1	10.4	6.75	38.6	9.58	2.4 ††	1320 †	1.89	6.44 ††	7.44	44.2	17.4	44.5

Lab. Code #	Method Codes	Soil sample identification and values for 2016: DTPA Extractable Fe (12A1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
8888	12A1	40.1	23.9	27.9	11.3	20	162	21.5 †	60	9.26	5.65	27.7	27
10166	12A1	39.7	31.4	28.6	16.5	28.1	237 †	32.8	55.5	10.7	8.31	33.2	39.6
20204	12A1	72.8	38.6	44.1	15.8	25.6	191	31.1	72.7	10.6	10	31.8	41
21088	12A1	42.5	29.2	34.1	11.3	19.4	154	23.1	60.7	11.4	7.65	28.1	31.5
21100	12A1	49.7	36	39.8	17.5	28.3	190	40.4	117	11.3	6.64	29.8	51.7
21178	12A1									9.5	5.9	39	21
21190	12A1	58	29	38	13	29	173	34	141 ††	11.4	6.31	31.4	54.2
21193	12A1	56.5	43.9	44.7	13.9	27.9	255 †	39	75.8	11.8	7.09	34.1	31.7
21196	12A1	64	29	42	11	17	17 †	20 †	19 †	9	6	29	25
21229	12A1	57.9	35	36.7	16	24.1	185	30.6	84.9	10.6	8.74	32.1	42.5
21232	12A1	61.3	36.4	37.1	16.9	23.9	195	32.6	101	7.08	4.22	25.4	33.4
21234	12A1									6.18 †	7.83	23.8	62.3
50003	12A1					17.5	98.2 †	17.4 ††	40.4	15.1 †	5.44	22.6	59.5
50005	12A1	58.7	38.7	35.2	15.2	25.6	201	27.7	95.6	9.54	17.9 ††	35.4	53.7
50011	12A1	61.6	30.1	35.6	7.73 †	25.2	225	33.2	106	10.7	6.91	39.2	42.7
50012	12A1	45	27	29	13	23	137 †	25	62	10.1	5.6	20	48
50013	12A1	61.6	36.2	44	14.5	25.1				12.4	5.18	22	111 ††
50014	12A1	47.1	31.3	33.9	15.5	23.4	186	30.1	68.3	11.1	6.71	35	32.8
50017	12A1	55.6	39.4	33.6	25.9 †					18 ††	8.72	43.6	35.6
50019	12A1									12.8	19.5 ††	48.3 ††	50.3
50020	12A1	55	34.2	42.4	17.9	20.4	163	29.3	75.9	19.2 ††	30.7 ††	56.6 ††	105 ††
50024	12A1	47.5	24.3	35.5	12.5	26.3	183	33.1	86.3	9.24	6.72	31.9	25.7
50025	12A1	93.4 †	42.1	51.5 ††	18.9	24	195	32.2	213 ††	10.3	7.96	36.3	115 ††
50027	12A1	47.1	25.2	33.6	11.6	23	182	26.7	66.2	9.8	4.7	29	23.3
50029	12A1	41.7	26	30.8	12.5	19.1	127 †	24.7	68.6	9.28	5.98	26.3	20.5
50031	12A1	49.6	30.3	36.1	15.1					12.8	9.4	45 †	35
50032	12A1	52.6	34	37.3	15.8	24.7	204	34.4	69.4	9.3	6.3	33	25.8
52283	12A1	121 †	35.3	39.5	14.8	15.7	194	34.7	248 ††	8.72	59.8 ††	9.85 ††	49.6
52387	12A1	70.8	40.2	47.6 †	19.8	27.7	189	35.9	121 †	12.6	8.56	31.8	46.6
52402	12A1	81.7 †	46.9	55.4 ††	19.5	28.9	147	42.7 †	137 †	32.8 ††	21.3 ††	55.6 ††	84 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: DTPA Extractable Cu (12A1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
8888	12A1	0.587	1.43	0.721	0.907	1.29	0.658	0.948 †	1.54	1.8	1.28	1.49	1.26
10166	12A1	0.74	1.82	0.9	1.19	1.5	1.37 †	1.26	2.04	1.99	1.79 †	1.83	1.62 †
20204	12A1	0.89	1.64	1.01	1.03	1.53	0.8	1.23	2.2	1.92	1.45	1.68	1.41
21088	12A1	0.644	1.56	0.781	0.929	1.3	0.812	1.03	1.62	1.77	1.43	1.54	1.36
21100	12A1	0.766	1.77	0.822	1.13	1.57	0.906	1.29	2	1.84	1.38	1.55	1.31
21178	12A1									2.2 ††	1.3	2	1.3
21190	12A1	0.764	1.7	1.1	1.04	1.58	0.828	1.25	2.31	1.93	1.45	1.72	1.46
21193	12A1	0.71	1.63	0.89	0.99	1.73	1.09 †	1.39	2.2	1.91	1.5	1.7	1.39
21196	12A1	0.89	1.85	1.04	1.15	18.4 ††	1.37 †	1.5	1.02 ††	1.87	1.37	1.72	1.3
21229	12A1	0.743	1.66	0.837	1.03	1.53	0.783	1.17	2.02	1.92	1.46	1.67	1.35
21232	12A1	0.721	1.66	0.86	1.06	1.56	0.8	1.23	2.08	1.64	1.12	1.53	1.26
21234	12A1									1.16 ††	1.02 †	1.23 ††	1.06 †
50003	12A1					4.3 ††	2 †	3.6 ††	5.6 ††	2.19 †	1.87 †	1.96	1.71 ††
50005	12A1	0.679	1.55	0.82	0.985	1.43	0.801	1.1	1.9	1.81	2.46 ††	1.57	1.37
50011	12A1	0.68	1.7	0.865	1.15	1.54	0.78	1.2	2.2	1.83	1.53	1.75	1.35
50012	12A1	0.632	1.5	0.775	0.958	1.4	1 †	1.1	1.7	1.6 †	1.3	1.6	1.2
50013	12A1	0.78	1.73	1.01	1.1	1.74				1.96	1.82 †	1.83	1.52
50014	12A1	0.719	1.75	0.874	1.12	1.59	1.27 †	1.31	2.02	2.01	1.4	1.86	1.48
50017	12A1	0.752	1.9	0.63	1.3					2.64 ††	1.25	2.09	1.85 ††
50019	12A1									1.98	2.74 ††	2	1.8 ††
50020	12A1	0.795	1.72	1.01	1.15	1.37	1.33 †	1.15	1.72	1.1 ††	1.48	0.973 ††	0.898 ††
50024	12A1	0.756	1.77	0.986	1.14	1.73	0.743	1.42	2.35	1.82	1.46	1.73	1.32
50025	12A1	0.739	1.68	0.902	1.07	1.44	0.773	1.16	2.02	1.86	1.41	1.73	1.36
50027	12A1	0.71	1.48	0.8	0.93	1.44	0.86	1.12	1.85	1.98	1.31	1.69	1.36
50029	12A1	0.661	1.4	0.812	0.911	1.18 †	0.757	0.961	1.6	1.55 ††	1.17	1.32 †	0.973 ††
50031	12A1	0.814	1.8	0.948	1.19					1.75	1.15	1.6	1.19
50032	12A1	0.675	1.59	0.896	1.04	1.57	1.12 †	1.26	2.07	1.91	1.3	1.75	1.31
52283	12A1	0.682	1.62	0.813	1.04	1.57	0.637	1.25	2.4	1.85	2.65 ††	1.75	1.59 †
52387	12A1	0.978 †	2.12 ††	1.13 †	1.41 †	1.72	0.908	1.29	2.1	2.03	1.71	1.8	1.52
52402	12A1	1.1 †	2.3 ††	14.3 ††	14.6 †	1.84	0.91	1.52 †	2.63 †	2.74 ††	2.41 ††	2.71 ††	2.32 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: DTPA Extractable Mn (12A1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
8888	12A1	140	14.1 †	98.2	33.9	24.1	49.4	55.6	338	21.3	331	144	441
10166	12A1	126	17.6	92.5	41	32.5	66 †	76.7 ††	407	27.9	488 ††	198 ††	591 ††
20204	12A1	132	17.5	93.7	38.6	30.2	54.6	57.6	260	26	399 †	194 ††	562 ††
21088	12A1	114	14.4	77.8	32.4	28.6	60.4	48.6	287	21.8	331	145	423
21100	12A1	108	15	75.9	31.9	25.6	54.6	49.5	269	22	291	142	403
21178	12A1									32	292	156	406
21190	12A1	120	18.5 †	85	39	34	58	66	218	26.8	227 ††	152	248 ††
21193	12A1	128	16.4	90.3	38.8	31.2	61.8	57.4	316	23.8	322	152	402
21196	12A1	147 †	16	96	36	7 ††	3 †	5 ††	7 ††	22	362	160	489
21229	12A1	128	16.4	87.1	35.5	29.4	51.4	53.6	306	26.6	327	148	452
21232	12A1	126	16.6	86.4	38.5	27.6	54.6	48.2	316	20	349	148	468
21234	12A1									9.22 ††	235 ††	65.3 ††	210 ††
50003	12A1					26.8	34.5 †	47.8	184 †	27.9	382	182 ††	452
50005	12A1	120	16.9	87.9	34	28.8	51.8	52.4	240	26	497 ††	164	425
50011	12A1	118	15.3	87.2	28 †	28.7	52.6	46.6	284	27	355	135	467
50012	12A1	117	17	78	36	25	60	51	259	18	336	143	417
50013	12A1	127	17	80.7	35.1	26.3				21.4	323	144	417
50014	12A1	128	17.9	93	37.6	27.7	61.4	57.6	313	22.5	351	159	458
50017	12A1	123	24.8 ††	72.3 ††	45.5 †					88.6 ††	240 ††	204 ††	389
50019	12A1									28	515 ††	76.3 ††	456
50020	12A1	123	15.8	91.8	35.1	24.6	55.5	49.3	336	21.7	566 ††	154	532 †
50024	12A1	134	16	101	37.5	30.2	51.5	62.3	380	23.5	366	156	461
50025	12A1	137	16.3	99.8	39.3	25.5	54	47.1	317	24.1	356	152	464
50027	12A1	126	14.9	88.7	31.8	24.2	56.2	49.6	294	21.1	334	147	447
50029	12A1	108	16	81.2	32.9	23.6	42.6 †	43.9	236	20.5	338	124 †	363 †
50031	12A1	134	18	92	37.4					19.5	351	150	471
50032	12A1	123	19 †	84	39.3	28.6	60.5	54	311	22.6	324	150	447
52283	12A1	122	16.8	88.7	35.6	29.1	51.5	62.3	345	23.9	420 †	132	438
52387	12A1	140	28.2 ††	91.6	50.6 †	29.4	59.2	57.4	300	27.4	282 †	364 ††	407
52402	12A1	148 †	26.4 ††	101	48.8 †	35.1	51.5	61	358	34.8 ††	294	192 ††	401

Lab. Code #	Method Codes	Soil sample identification and values for 2016: DTPA Extractable Zn (12A1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
8888	12A1	0.415	0.297 ††	2.29 †	0.166	2.24	10.8 †	0.46	0.769	1.2 †	0.696	0.87	3.07
10166	12A1	0.53	0.65 ††	3	0.39	2.95 ††	22.7 †	0.675	0.805	1.15	0.75	0.93	3.29 †
20204	12A1	0.61	0.43	3.48 ††	0.27	2.28	15.1	0.6	1.01	1.03	0.69	0.895	2.68
21088	12A1	0.473	0.282 ††	2.27 ††	0.183	1.71 ††	14.8	0.419 †	0.402 ††	1.09	0.643	0.824	2.87
21100	12A1	0.601	0.426	2.99	0.242	2.33	14	0.559	0.902	0.946	0.607	0.752	2.72
21178	12A1									1.04	0.47	0.83	2.4
21190	12A1	0.614	0.594 ††	3.1	0.225	2.68 ††	16	0.7	1.05	0.953	0.545	0.855	2.96
21193	12A1	0.48	0.42	2.98	0.22	2.36	18.4 †	0.6	0.81	1.01	0.61	0.86	2.71
21196	12A1	0.53	0.41	2.94	0.24	5.2 ††	1.65 †	0.48	0.3 ††	0.98	0.57	0.82	2.64
21229	12A1	0.509	0.407	2.84	0.188	2.22	15	1.5 ††	0.918	1.07	0.609	0.804	2.92
21232	12A1	0.539	0.423	2.72	0.318	2.19	14.4	0.623	0.896	0.915	0.419 †	0.728	2.51
21234	12A1									0.37 ††	1.01 ††	0.8	1.76 ††
50003	12A1					1.6 ††	12.3	0.55	0.76	1.01	0.701	0.958	3.11
50005	12A1	0.571	0.472	2.81	0.534 †	2.31	15.2	0.614	0.882	0.984	1.08 ††	0.888	2.72
50011	12A1	0.503	0.448	2.76	0.387	2.34	15.3	0.71	0.96	0.989	0.58	0.91	2.78
50012	12A1	0.505	0.374	2.3 †	0.249	2.2	15	0.61	0.77	0.96	0.552	0.705	2.4
50013	12A1	0.47	0.34 †	2.88	0.27	2.29				0.93	0.61	0.77	2.87
50014	12A1	0.509	0.957 ††	2.6	0.262	2.29	17.5	0.615	0.85	1.04	0.601	0.909	2.84
50017	12A1	0.611	0.47	2.47	0.285					1.6 ††	0.611	1.07 ††	3.74 ††
50019	12A1									1.12	0.99 ††	0.91	3.03
50020	12A1	0.545	0.41	2.83	0.333	1.93 ††	11.6 †	0.589	0.82	1.06	0.938 ††	0.871	2.66
50024	12A1	0.49	0.4	3.12	0.24	2.38	15.2	0.59	0.922	10.7 ††	0.562	0.782	2.66
50025	12A1	0.648	0.492	3.37 †	0.291	2.18	14.2	0.728	1.06	1.01	0.634	0.888	2.88
50027	12A1	0.53	0.4	2.61	0.25	2.34	15.3	0.67	0.93	1.03	0.56	0.84	2.68
50029	12A1	0.503	0.447	2.26 ††	0.293	1.81 ††	11.8	0.538	0.744	0.879 †	0.552	0.75	1.97 ††
50031	12A1	0.518	0.495	2.74	0.365					1.06	0.511	0.96	2.41
50032	12A1	0.49	0.47	2.79	0.36	2.28	16.3	0.64	0.83	1.05	0.54	0.94	2.67
52283	12A1	0.564	0.44	2.86	0.317	2.54 †	13.8	0.216 ††	0.754	1.1	0.898 ††	0.806	2.96
52387	12A1	0.598	0.496	2.98	0.322	2.07 †	13.1	0.6	0.886	0.978	0.652	0.792	2.64
52402	12A1	0.62	0.561 ††	3.81 ††	0.309	1.16 ††	5.71 †	0.293 ††	0.486 ††	1.29 ††	0.77 †	1.15 ††	3.51 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: CaCl2 Extractable B (12C1 + 12C2) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10166	12C1	0.4	1.52	0.44	1.41	1.21	4.63	0.41	0.58	0.04 ††	1.71	0.78	1.46
10173	12C2	0.5	1.7	0.6	1.55	1.3	1.05	0.3	0.5	0.1	1.8	0.7	1.5
20204	12C2	0.544	1.97	0.765	1.55	1.49	3	0.4	0.475	0.123	1.69	0.688	1.43
21043	12C2	0.701	2.36	0.76	2.09	1.77	5.3	0.467	0.653	0.135	2.5	1.04	2.03
21088	12C2	0.526	2.48	0.764	2.31	1.25	4.76	0.502	0.582	0.117	2.09	0.691	1.48
21100	12C2	0.59	1.38	0.503	0.739	1.42	3.56	0.388	0.572	0.114	1.81	0.636	1.48
21138	12C2									0.033 ††	1.36	0.294 †	1.35
21178	12C2									0.12	2.5	0.99	1.9
21196	12C2	0.69	2.76	0.83	2.17	2.09	3.85	0.52	0.76 ††	0.16 †	2.74	1.09	1.99
21229	12C2	0.47	2.05	0.54	1.8	1.55	2.72	0.381	0.435	0.121	1.99	0.733	1.53
21232	12C2	0.485	2.14	0.713	1.94	1.53	3.33	0.48	0.5	0.132	2.18	1.01	1.81
50005	12C2	0.831 †	1.92	0.634	1.63	1.5	2.75	0.402	0.45	0.219 ††	1.08	0.477	1.57
50011	12C2	0.464	2.08	0.644	1.9	1.37	2.54	0.41	0.52	0.133	1.59	0.862	1.45
50012	12C2	0.57	1.6	0.681	1.1	1.1	5.6	0.528	0.471	0.085 †	1.9	0.635	1.6
50014	12C2	0.659	2.49	0.892	1.78	1.72	3.77	0.44	0.56	0.13	2.66	1.01	2.09
50017	12C2	0.512	1.72	0.632	1.3					0.113	2.08	0.661	1.75
50020	12C2	0.517	3.15	1.18 ††	3.47 †	2.5 ††	2.83	0.717 ††	0.767 ††	0.138	3.23 ††	1.35 ††	1.99
50025	12C2	0.547	2.5	0.838	2.13	1.86	1.73	0.508	0.464	1.34 ††	2.38	0.958	1.9
50027	12C2	0.34	1.7	0.37	1.78	1.54	1.41	0.4	0.34	0.19 ††	1.5	0.72	1.23
50029	12C2	0.306 †	1.25	0.32	1.25	0.897	0.275	0.34	0.324	0.115	1.45	0.708	0.863
50032	12C1									0.2 ††	1.7	0.95	0.5 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable Ca — 1M NH_4Cl extract (15A1) cmol+/kg oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	15A1	3.71	19.5 ††	6.69	44.6	12.7	9.32	26.5	3.82 †	7.59	7.47	22.4	7.51
21091	15A1	4.3	23 ††	45 ††	6.7 †					8.8	8	25	6.2
21138	15A1	3.61	23.4 ††	7.19	43	14	9.17	24.6	3.35	8.5	8.8	27.4	7
21178	15A1									8.23	8.52	29.2	6.72
21182	15A1	3.1	19 ††	6.4	43	13	7.7 †	25	3.4	9.2	10	27	7.6
21193	15A1	3.33	21.6	7.43	44.9	13.7	9.63	25.4	3.4	8.93	10.1	30.2	7.5
21232	15A1	3.53	20.2	7.05	41.9	12.8	9.9	26.3	3.73	8.85	9.45	28.4	7.27
50005	15A1	3.44	21.5	7.04	41.3	12.3	9.28	23.6	3.52	8.73	8.98	25.3	7.07
50011	15A1	3.62	21.5	6.97	32.3 †	12.7	9.56	25.3	3.58	8.34	8.53	32	6.76
50013	15A1	3.4	20.1	6.9	43.4	13.2				9.5	9.8	29.5	8.1
50014	15A1	3.6	21.8	7.18	45.3	13	9.67	26.3	3.62	8.68	9.79	29.1	7.34
50017	15A1	3.37	20.7	6.64	42.8					7.82	9.01	26.1	6.61
50019	15A1	4.04	23.8 ††	7.9	46.9	11.8	8.41	23.5	3.21	8.97	8.82	26	7.01
50020	15A1	3.88	21.7	7.67	39.5	10.1 ††	9.35	24	3.08 †	7.4 ††	7.66	26.2	5.89
50023	15A1	3.46	21.6	7.36	46.4	13	9.11	26.4	3.49	8.66	9.51	28.9	7.68
50031	15A1	3.89	21.3	7.62	18.7 †	12	9.4	25.5	3.57	9.34	10.4	30.9	7.75
50038	15A1	3.27	21.9	6.71	50.2	14.2	9.97	29.2	3.46				
50044	15A1					12	2.8 †	25	3.2	6.9 ††	6.7 ††	21 ††	5.1 ††
52283	15A1	3.85	21.5	7.16	46.8	12.8	9.23	26.1	3.68	8.84	8.91	28.2	6.86
52334	15A1	3.94	21.3	6.98	45.5	13.7	8.39	24.9	3.42	9.04	9.43	28	7.78
52387	15A1	2.78	17.2 ††	5.49 ††	36	10.8 ††	3.34 †	20.5 ††	2.98 †	7.5	7.68	24.1	5.43 †
52417	15A1					13.3	7.91	24	3.17	7.23 ††	8.41	28.1	6.59

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable K — 1M NH_4Cl extract (15A1) cmol+/kg oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	15A1	0.637	1.71	0.258	0.663	1.04	0.091	0.386	1.27	0.101	1.34	1.29	1.44
21091	15A1	0.62	2.5 ††	0.22	0.56					0.09	0.92 ††	0.81 ††	0.97 ††
21138	15A1	0.65	1.72	0.225	0.638	1.06	0.074	0.38	1.4	0.11	1.39	1.27	1.52
21178	15A1									0.11	1.44	1.3	1.55
21182	15A1	0.59	1.6	0.21	0.68	1.1	0.06	0.41	1.3	0.1	1.6	1.2	1.5
21193	15A1	0.57	1.48 ††	0.24	0.009 †	1.02	0.2 †	0.47 ††	1.39	0.23 ††	1.62	1.4	1.62
21232	15A1	0.708	1.76	0.308 ††	0.735	1.08	0.09	0.4	1.47	0.113	1.44	1.3	1.44
50005	15A1	0.63	1.73	0.225	0.676	1.05	0.0825	0.376	1.43	0.101	1.45	1.32	1.56
50011	15A1	0.632	1.74	0.234	0.62	1.1	0.07	0.37	1.45	0.107	1.55	1.35	1.54
50013	15A1	0.6	1.7	0.2	0.6	1				0.11	1.5	1.4	1.6
50014	15A1	0.67	1.74	0.244	0.681	1.1	0.064	0.386	1.46	0.125	1.59	1.38	1.59
50017	15A1	0.65	1.72	0.22	0.68					0.0919	1.56	1.52	1.52
50019	15A1	0.66	1.8	0.27	0.78	0.766 ††	0.154 †	0.334	0.892 ††	0.1	1.24	1.16	1.29
50020	15A1	0.681	1.78	0.236	0.693	1.03	0.0625	0.351	1.35	0.0914	1.26	1.2	1.35
50023	15A1	0.66	1.79	0.227	0.687	1.1	0.077	0.4	1.44	0.1	1.59	1.37	1.61
50031	15A1	0.621	1.68	0.21	0.598	1.06	0.06	0.38	1.4	0.112	1.78	1.58	1.77
50038	15A1	0.286 †	1.33 ††	0.014 ††	0.196 †	10.2 ††	0.313 †	3.38 ††	13.9 ††				
50044	15A1					1	0.052	0.36	1.4	0.087	1.2	1	1.3
52283	15A1	0.614	1.67	0.212	0.641	1.12	0.062	0.36	1.42	0.108	1.58	1.43	1.6
52334	15A1	0.58	1.59		0.64	1.07			1.23		1.49	1.36	1.73
52387	15A1	0.516 †	1.36 ††	0.166 ††	0.484 †	0.795 ††	0.0583	0.271 ††	1.08 ††	0.0837	1.02	0.889 ††	1.07 ††
52417	15A1					0.923	0.0942 †	0.33	1.05 ††	0.114	1.14	1.01	1.09 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable Mg — 1M NH_4Cl extract (15A1) cmol+/kg oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	15A1	1.32	10.3	0.808 ††	9.74	5.86	19.1	11	0.881 ††	1.16	1.75	8.3	2.29
21091	15A1	1.4 †	11	0.9 ††	10					1.3	1.8	8.4	2.2
21138	15A1	1.1	10.6	0.636	9.95	5.8	18.5	10	0.7	1.19	1.7	8.45	2.2
21178	15A1									1.09	1.7	8.85	2.2
21182	15A1	1	10	0.56	9.9	6.2	16	11	0.72	1.3	2	8.8	2.5
21193	15A1	0.96	9.33	0.59	9.24 †	5.71	19.2	10.3	0.7	1.1	1.86	8.59	2.27
21232	15A1	1.1	10.6	0.614	10	6.03	20.3	10.7	0.74	1.17	1.96	9.29	2.33
50005	15A1	1.1	10.1	0.609	9.61	5.79	18.3	10.4	0.718	1.18	1.81	8.35	2.27
50011	15A1	1.13	10.7	0.6	10.1	5.94	18.5	9.95	0.69	1.19	1.67	8.43	2.36
50013	15A1	1.1	10.4	0.6	9.8	5.8				1.2	1.9	8.9	2.4
50014	15A1	1.23	11.4	0.665	10.9 †	6.15	19.8	10.8	0.74	1.23	1.97	9.2	2.38
50017	15A1	1.06	10.1	0.56	9.43					1.13	1.83	8.42	2.19
50019	15A1	1.32	12.4 ††	0.74	11.7 †	5.44	16.8	9.56	0.643	1.03	1.59	7.81	2.05
50020	15A1	1.32	13.1 ††	0.72	12.7 †	6.07	22	11.2	0.721	0.94 ††	1.51	7.69	1.95 ††
50023	15A1	1.17	11.5	0.67	11.2 †	5.74	17.8	10.3	0.67	1.15	1.9	8.8	2.29
50031	15A1	1.15	10.6	0.64	10.2	6	19.2	10.6	0.744	1.33	2.05	9.57 ††	2.54
50038	15A1	1.06	9.93	0.631	9.7	6.12	20.3	10.7	0.659				
50044	15A1					5.4	1.1 †	9.4	0.65	1	1.5	6.7 ††	1.9 ††
52283	15A1	1.13	10.4	0.603	10.1	5.83	18.8	10.5	0.531 ††	1.16	1.82	8.57	2.29
52334	15A1	1.15	10.8	0.54	10	6.37	17.5	10.1	0.677	1.27	1.85	9.05	2.4
52387	15A1	1.04	10.4	0.566	9.84	5.07 ††	1.21 †	9	0.604	1.16	1.8	8.54	2.31
52417	15A1					6.75 ††	19.4	11.4	0.81	1.63 ††	2.35 ††	9.62 ††	2.9 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable Na — 1M NH_4Cl extract (15A1) cmol+/kg oven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	15A1	0.463 †	1.32	0.195	0.84	0.234	20.8	0.389 ††	0.134 †	0.137 ††	0.24 ††	0.237 ††	0.301 †
21091	15A1	0.5 †	1.3	0.4 ††	1								
21138	15A1	0.391	1.53 ††	0.321 ††	1.09	0.37 ††	20.5	0.3 †	0.12 †	0.121 ††	0.156	0.338 ††	0.227
21178	15A1									0.075 †	0.15	0.12	0.22
21182	15A1	0.31	1.3	0.13	0.87	0.22	17	0.15	0.02	0.04	0.13	0.09	0.17
21193	15A1	0.26	0.96 ††	0.13	0.59	0.24	18.6	0.19	0.071	0.096 †	0.17	0.15	0.23
21232	15A1	0.421	1.45	0.294 ††	0.997	0.24	20.6	0.16	0.09	0.078 †	0.137	0.189 †	0.197
50005	15A1	0.343	1.3	0.15	0.853	0.229	21.2	0.121	0.00846	0.0487	0.129	0.104	0.201
50011	15A1	0.337	1.31	0.15	0.8	0.239	21.1	0.167	0.03	0.055	0.132	0.112	0.191
50013	15A1	0.3	1.2	0.1	0.7	0.2				0.04	0.14	0.11	0.22
50014	15A1	0.345	1.31	0.135	0.817	0.224	21.6	0.243	0.027	0.042	0.122	0.087	0.183
50017	15A1	0.37	1.5 ††	0.24 ††	1.19 †					0.137 ††	0.217 ††	0.422 ††	0.273
50019	15A1	0.48 †	1.55 ††	0.3 ††	1.08	0.202	15.8 †	0.16	0.045	0.04	0.11	0.09	0.17
50020	15A1	0.381	1.49 ††	0.17	0.95	0.237	21.9	0.237	0.005	0.0392	0.107	0.0852	0.164
50023	15A1	0.34	1.33	0.15	0.83	0.227	21.3	0.147	0.02	0.033	0.12	0.083	0.187
50031	15A1	0.333	1.31	0.136	0.793	0.242	22.1	0.168	0.041	0.03	0.049 ††	0.032	0.108
50038	15A1	0.326	1.26	0.159	0.802	2.04 ††	192 †	1.3 ††	0.113 †				
50044	15A1					0.21	0.92 †	0.14	0.026	0.029	0.11	0.075	0.16
52283	15A1	0.339	1.3	0.137	0.84	0.277	20.5	0.245	0.08	0.05	0.144	0.106	0.217
52334	15A1		1.25		0.76		18.1				0.22 ††	0.22 ††	0.3 †
52387	15A1	0.356	1.09 ††	0.168	0.689	0.129 ††	0.772 †	0.105	0.0346	0.04	0.137	0.102	0.151
52417	15A1					1.51 ††	21.1	1.36 ††	1.28 ††	1.32 ††	1.4 ††	1.37 ††	1.43 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable Ca — 1M NH_4OAc extract (15D3) cmol+/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10166	15D3	3.21	17.3 †	5.92 †	31.1 †	10.2 ††	8.16	21.4 †	3.58	8.11	9.22	27.4	7.23
10173	15D3	3.9	22.8 †	7.44 †	55.3 †	12.3	9.1	25.2	3.4	8	9.2	29	7.1
10181	15D3	3.27	19	6.7	39	11.7 †	8.93	24.1	3.4	8.02	8.46	25.9	6.64
20204	15D3	3.64	20.5	6.61	47.6	12.5	8.9	25.9	3.53	8.91	10.3 †	34.4 †	8.25 ††
21043	15D3	3.36	20.6	6.51	43.7	11.7 †	8.76	25.1	3.36	8.02	8.86	27.3	6.56
21088	15D3	3.51	20.6	6.45	46.7	12.5	8.23	25	3.39	9.43 †	11.4 ††	31	7.97 ††
21100	15D3	3.81	19.4	6.13	37.2	12.3	9.41	25.7	3.72	8.23	8.36	25.3	6.66
21115	15D3	3.37	22.5 †	7.57 ††	79.8 †	14.1 †	8.41	24.4	3.28	3.66 ††	3.33 ††	13.1 ††	2.57 ††
21190	15D3	4.56 †	22.2 †	8.28 ††	59.8 †	14.7 ††	8.77	27.2	3.78	8.86	9.3	30.1	7.45
21196	15D3	3.51	21.1	6.63	42.7	12.4	8.31	25.5	3.31	8.51	8.78	26.9	5.84 ††
21229	15D3	3.35	21	6.81	43.6	12	8.9	25.1	3.43	8.47	8.62	28.9	6.74
21234	15D3									4.7 ††	3.76 ††	11.6 ††	3.69 ††
50005	15D3	3.38	20.5	6.72	41.7	12	8.85	22.9 †	3.43	8.53	8.72	25	6.96
50006	15D3					13.4 †	9.6	27.1	3.9 †	56.8 ††	56.2 ††	190 ††	46.2 ††
50020	15D3	3.71	22.3 †	7.39 †	42.1	14.5 ††	10.3 †	27.9 †	3.97 †	8.15	8.36	28	7.09
50024	15D3	3.17	18.2 †	6.53	37.2	12.4	8.36	24	3.36	8.35	9.41	27.3	6.92
50025	15D3	3.53	21	6.84	42	13.2	9.88	28.4 †	3.73	8.45	8.81	28.2	6.83
50027	15D3	3.59	20	7.12	40.6	12.9	8.73	25.4	3.74	8.67	8.75	26.3	6.91
50029	15D3	2.81 †	15.5 ††	5.87 †	30.6 †	9.67 ††	7.32 †	22.4 †	3.02 †	8.13	8.25	24.1	5.98 †
50030	15D3	3.3	20.4	6.38	42.4	12.8	8.23	26.8	3.5	8.59	9.56	29.4	6.97
50032	15D3	3.61	20.8	6.96	40.2	12.5	9.06	26.2	3.59	8.9	9.21	29.9	7.28
52402	15D3	3.14	19	6.04	37.5	12.2	9.29	30.3 †	3.39	8.29	8.56	26.1	6.73
52434	15D3					13.8 †	8.7	28.5 †	3.57	8.9	9.63	32.5	7.2
52437	15D3	3.62	16.9 †	6.4	9.3 †	14.2 †	11 †	29.3 †	9.44 ††	9.77 ††	7.76	19.3 ††	7.15

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable K — 1M NH_4OAc extract (15D3) cmol+/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10166	15D3	0.27 †	0.67 ††	0.091 ††	0.057 †	1.1 †	0.159 †	0.336 †	1.58 ††	0.07 ††	1.3	1.01 †	1.45
10173	15D3	0.643	1.73 †	0.232	0.699	0.836 ††	0.0875	0.355	1.41	0.867 ††	1.3	1.2	1.2 ††
10181	15D3	0.321 †	1.21 ††	0.136 ††	0.74 †	0.922 ††	0.06	0.329 †	1.26 †	0.088	1.22	1.09 †	1.31
20204	15D3	0.611	1.64	0.204	0.659	1.03	0.071	0.371	1.17 ††	0.112	1.58	1.51 ††	1.63
21043	15D3	0.575 †	1.59	0.207	0.614	0.999	0.078	0.37	1.34	0.09	1.38	1.19	1.39
21088	15D3	0.613	1.74 †	0.223	0.86 †	1.05	0.093	0.454 ††	1.2 †	0.107	1.37	1.35 †	1.36
21100	15D3	0.692 †	1.55	0.19	0.58	1.03	0.0645	0.379	1.35	0.094	1.38	1.21	1.49
21115	15D3	0.59	1.53	0.24	0.59	1.04	0.07	0.37	1.35	0.05 ††	0.72 ††	0.65 ††	0.79 ††
21190	15D3	0.648	1.68	0.238	0.65	1.05	0.0643	0.371	1.38	0.108	1.41	1.24	1.5
21196	15D3	0.643	1.62	0.219	0.645	1.01	0.081	0.389 †	1.27 †	0.102	1.39	1.25	1.24 †
21229	15D3	0.618	1.64	0.214	0.634	1.02	0.0653	0.36	1.39	0.106	1.39	1.24	1.47
21234	15D3									0.07 ††	1.2	1.13 †	1.38
50005	15D3	0.62	1.65	0.219	0.657	0.997	0.0624	0.365	1.32	0.102	1.34	1.23	1.43
50006	15D3					1.07 †	0.086	0.375	1.41	0.74 ††	7.53 ††	7.08 ††	8.27 ††
50007	15D3	0.658 †	1.62	0.232	0.644	0.959 †	0.065	0.358	1.3	0.104	1.39	1.35 †	1.48
50020	15D3	0.692 †	1.71	0.237	0.653	1.33 ††	0.0914	0.434 ††	1.85 ††	0.0781	1.25	1.14	1.39
50024	15D3	0.607	1.6	0.222	0.63	1.04	0.082	0.384	1.39	0.09	1.48	1.25	1.47
50025	15D3	0.609	1.57	0.204	0.602	1.06	0.0788	0.364	1.38	0.0968	1.42	1.23	1.49
50027	15D3	0.641	1.51 †	0.219	0.58	1.05	0.071	0.365	1.43	0.108	1.37	1.22	1.47
50029	15D3	0.485 †	1.58	0.185 †	0.751 †	0.985 †	0.107 †	0.434 ††	1.07 ††	0.102	1.35	1.22	1.34
50030	15D3	0.61	1.59	0.2	0.58	1.02	0.06	0.35	1.37	0.11	1.52	1.29	1.52
50032	15D3	0.62	1.6	0.22	0.58	0.977 †	0.069	0.349	1.36	0.097	1.38	1.21	1.48
50045	15D3	0.64	1.62	0.22	0.628	1.03	0.079	0.37	1.4				
52402	15D3	0.582 †	1.46 †	0.201	0.546	1.03	0.075	0.363	1.48 †	0.101	1.25	1.14	1.42
52434	15D3	0.61	1.81 ††	0.21	0.64	1.13 †	0.06	0.34 †	1.35	0.13 ††	1.75 ††	1.54 ††	1.67 †
52435	15D3	0.39 †	0.92 ††	0.14 ††	0.29 †	0.42 ††	0.02 †	0.11 ††	0.33 ††	0.05 ††	0.52 ††	0.34 ††	0.67 ††
52436	15D3	0.7 †	1.8 †	0.28 ††	0.66	1.03	0.6 †	0.35	1.48 †	0.1	1.43	1.25	1.59
52437	15D3	0.07 †	0.22 ††	0.13 ††	0.13 †	2.26 ††	0.65 †	0.77 ††	3.65 ††	0.2 ††	1.25	1 †	1.3

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable Mg — 1M NH_4OAc extract (15D3) cmol+/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10166	15D3	1.14	10.2	0.58	8.97	5.2 ††	18.3	9.81	0.687	1.15	1.74	8.23	2.3
10173	15D3	1.15	10.7 †	0.65 †	10.3	5.85	19.3	10	0.754 †	1.1	1.7	8.5	2.2
10181	15D3	0.98	9.77	0.528	8.97	5.41 †	16.7 †	9.16 †	0.594 †	1.03	1.6 †	8.19	2.03
20204	15D3	1.3 †	10.3	0.75 ††	10.2	5.66	18.1	10.3	0.813 ††	1.2	1.79	9 ††	2.31
21043	15D3	1.03	10	0.562	9.23	5.42 †	17.4	9.69	0.657	1.04	1.7	7.93	2.05
21088	15D3	0.984	10.1	0.541	10.1	6.4 ††	19.7	11 †	0.693	1.03	1.75	8.1	2.04
21100	15D3	1.18 †	9.64 †	0.512	8.72 †	6.2 †	18.5	10.1	0.745 †	1.18	1.75	8.2	2.27
21115	15D3	0.98	10.2	0.56	11.2 †	5.98 †	18.5	9.86	0.68	0.47 ††	0.58 ††	3.88 ††	0.81 ††
21190	15D3	1.25 †	8.64 ††	0.706 ††	9.18	5.67	13.6 †	9.16 †	0.65	1.23	1.75	8.05	2.22
21196	15D3	1.08	10.5 †	0.561	9.9	5.93	17.9	10.4	0.668	1.15	1.74	8.35	1.87 †
21229	15D3	1.07	10.5 †	0.577	9.8	5.74	19	9.97	0.673	1.11	1.64 †	8.22	2.09
21234	15D3									0.61 ††	0.78 ††	3.47 ††	1.02 ††
50005	15D3	1.07	10.1	0.581	9.52	5.64	17.9	9.87	0.672	1.14	1.72	8.07	2.22
50006	15D3					5.85	19.1	10.2	0.723 †	1.7 ††	2.29 ††	11.7 ††	3.03 ††
50020	15D3	1.34 †	12.3 ††	0.675 †	11.4 †	6.77 ††	21.6 †	11.2 ††	0.835 ††	1.11	1.66	8.52	2.24
50024	15D3	1.09	9.69 †	0.61	9.46	5.72	18.1	9.89	0.691	1.12	1.83 †	8.33	2.16
50025	15D3	1.07	9.59 †	0.589	9.42	5.8	18.5	10.1	0.702	1.17	1.76	8.16	2.19
50027	15D3	1.07	9.71 †	0.622	10.5	5.8	19.5	10.1	0.79 †	1.18	1.71	7.87	2.26
50029	15D3	0.848 †	8.39 ††	0.469 †	7.73 †	4.71 ††	16.4 †	8.46 ††	0.565 ††	1.14	1.71	8.26	2.03
50030	15D3	1.06	10.6 †	0.56	10.3	5.89	18.5	10.6	0.7	1.1	1.83 †	8.63 †	2.16
50032	15D3	1.04	10.3	0.55	10.3	5.53	18	9.87	0.677	1.07	1.54 ††	8.12	2.02
52402	15D3	4.77 †	31.3 ††	9.96 ††	61.8 †	5.86	21.1 †	10.8 †	0.681	1.09	1.68	8.25	2.16
52434	15D3					5.69	18.6	10.3	0.64 †	1.21	1.7	8.99 ††	2.25
52437	15D3	0.92 †	8.96 †	0.5	8.38 †	5.58	12.1 †	2.76 ††	1.16 ††	4.11 ††	4.78 ††	6.59 ††	5.86 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable Na — 1M NH_4OAc extract (15D3) cmol+/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10166	15D3	0.135 †	0.459 ††	0.057 ††	0.294 †	0.171 †	19.4	0.189	0.021	0.077 †	0.121	0.091	0.174
10173	15D3	0.346	1.18	0.164	0.894	0.208	20.3	0.411 ††	0.065 †	0.0248	0.122	0.079	0.154 †
10181	15D3	0.591 †	1.52 ††	0.212	0.555 †	0.202	19.5	0.136	0.025	0.032	0.105	0.083	0.17
20204	15D3	0.412 †	1.3	0.188	0.861	0.226	19.5	0.376 ††	0.34 ††	0.098 ††	0.15 †	0.15 ††	0.2 †
21043	15D3	0.339	1.31	0.155	0.818	0.241	19.5	0.171	0.053	0.054	0.139 †	0.107 †	0.191 †
21088	15D3	0.28 †	1.2	0.11	0.79	0.31 ††	22 †	0.22	0.052	0.078 †	0.149 †	0.26 ††	0.216 ††
21100	15D3	0.368	1.15	0.164	0.731	0.588 ††	19.3	0.161	0.0495	0.0843 †	0.117	0.0879	0.17
21115	15D3	0.34	1.23	0.21	0.85	0.23	21.1 †	0.15	0.06	0.05	0.08 †	0.07 †	0.12 ††
21190	15D3	0.36	1.45 †	0.171	0.835	0.224	16.8 †	0.16	0.0196	0.0183	0.0922 †	0.0748	0.169
21196	15D3	0.366	1.37	0.158	0.875	0.235	19.3	0.162	0.024	0.033	0.115	0.086	0.152 †
21229	15D3	0.308	1.23	0.131	0.775	0.209	20.5	0.142	0.0215	0.04	0.115	0.086	0.182
21234	15D3									0.05	0.14 †	0.12 ††	0.22 ††
50005	15D3	0.328	1.33	0.138	0.826	0.219	20	0.137	0.0325	0.0476	0.11	0.0902	0.179
50006	15D3					0.248	22.8 †	0.126	0.032	4.02 ††	0.24 ††	3.34 ††	5.16 ††
50020	15D3	0.381	1.41	0.152	0.887	0.38 ††	19	0.11	0.005	0.0442	0.109	0.0866	0.174
50024	15D3	0.348	1.29	0.156	0.84	0.217	19.2	0.14	0.019	0.032	0.117	0.085	0.177
50025	15D3	0.369	1.33	0.179	0.857	0.254	20.3	0.198	0.0753 †	0.0826 †	0.154 †	0.119 ††	0.212 ††
50027	15D3	0.336	1.21	0.138	0.695	0.238	19.7	0.159	0.04	0.037	0.108	0.081	0.176
50029	15D3	0.26 †	1.16	0.127	0.887	0.224	20.8	0.258 ††	0.0305	0.04	0.113	0.0837	0.165
50030	15D3	0.31	1.18	0.11	0.77	0.2	19.1	0.18	0.02	0.02	0.1	0.07 †	0.17
50032	15D3	0.325	1.26	0.138	0.756	0.214	19.6	0.135	0.028	0.032	0.112	0.083	0.177
52402	15D3	0.204 †	1.24	0.073 †	0.742	0.233	32.2 †	0.163	0.046	0.057	0.168 ††	0.125 ††	0.182
52434	15D3					0.46 ††	21.2 †	0.22	0.09 ††	0.09 †	0.22 ††	0.15 ††	0.21 ††
52437	15D3	0.74 †	1.62 ††	0.99 ††	0.72	0.33 ††	0.57 †	0.32 ††	0.05	0.02	0.02 ††	0.06 †	0.04 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Exchangeable Al — 1M KCl (15G1) cmol+/kgoven dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	15G1	0.012	0.003	0.015	0.003	0.003	22.6	0.01	0.016	0.001	0.008	0.007	0.017
21043	15G1	0.02	0.005	0.04	0.002	0.003	20.7	0.001	0.073	0.013	0.007	0.003	0.015
21088	15G1	0.00966	0.002	0.033	0.0032	0.005	23.7	0.005	0.06	0.1 ††	0.23 ††	0.35 ††	1.07 ††
21100	15G1	0.0267	0.013	0.046	0.0135 †	0.0297 ††	10.1 †	0.0154	0.0523	0.00339	0.0236	0.019	0.0362 †
21196	15G1	0.013	0.002	0.038	0.004	0.002	17.9 †	0.01	0.089				
21229	15G1	0.045	0.005	0.047	0.0032	0.0092	24.4	0.011	0.098	0.00909	0.0338 †	0.001	0.0233
21232	15G1	0.116 †	0.11 ††	0.103 ††	0.102 †	0.04 ††	33.4 †	0.07 ††	0.13	0.097 ††	0.243 ††	0.063 ††	0.098 ††
50005	15G1	0.0113	0.005	0.029	0.0072	0.0069	24.4	0.00819	0.0327	0.00566	0.0105	0.00729	0.0144
50011	15G1	0.0304	0.005	0.032	0.001	0.005	24.4	0.002	0.08	0.005	0.005	0.005	0.014
50014	15G1	0.0303	0.001	0.015	0.001	0.01	24.5	0.031 ††	0.203 ††	0.015	0.016	0.016	0.016
50017	15G1	0.026	0.019 †	0.074 ††	0.025 †					0.004	0.007	0.007	0.02
50027	15G1	0.017	0.01	0.044	0.01	0.005	22.3	0.005	0.193 ††				0.009
50029	15G1	0.0537	0.024 ††	0.025	0.03 †	0.0371 ††	7.07 †	0.005	0.0632	0.0408 ††	0.0761 ††	0.0569 ††	0.0818 ††
50030	15G1	0.07 †	0.01	0.07 ††	0.01	0.01	19.4	0.01	0.16 †	0.01	0.02	0.01	0.05 †
50032	15G1	0.018	0.003	0.042	0.001	0.008	23.2	0.002	0.085	0.004	0.004	0.004	0.025

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable Al – Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
22	18F1	708	847	1670	783	514	2440	993	997	383	1380	866	1290
8888	18F1	668	785	1520	721	511	2140	1070	1050	365	1340	839	1270
10156	18F1	607	1440 ††	889 ††	965	302 ††	1510 †	627 ††	580 ††				
21100	18F1	675	765	1480	698	673 ††	2690	960	979	384	1190	832	1180 †
21178	18F1									369	1390	900	1320
21229	18F1	730	853	1590	798	506	2490	994	981	397	1250	860	1260
21232	18F1	729	833	1580	737	501	2640	959	1020	388	1300	858	1240
50004	18F1	649	801	1580	771	534	2560	1000	981	401	1330	832	1280
50005	18F1	658	863	1610	887	515	2530	905	837 †	387	1300	904	1250
50014	18F1	732	875	1650	814	524	2400	1020	988	395	1300	887	1230
50020	18F1	635	750	1700	695	454 †	2190	898	820 †	391	1420	874	1320
50024	18F1	768	907	1760	826	605 ††	2550	1060	1050	375	1420	910	1280
50042	18F1	611	568 ††	1480	580	310 ††	1340 †	584 ††	593 ††	60 ††	407 ††	324 ††	548 ††
52283	18F1	634	850	1550	879	517	2660	1050	1030	374	1650 ††	1100 ††	1570 ††
52417	18F1					408 ††	1670 †	289 ††	226 ††	140 ††	672 ††	189 ††	565 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable B – Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
22	18F1	0.292	2.44	0.42	2.6	1.45	0.256	0.37	0.19	0.092	1.47	0.815	0.788
8888	18F1	0.343	2.27	0.437	2.18	1.48	0.275	0.398	0.291	0.301 †	1.29	0.935	0.903
10156	18F1	0.125	0.396 ††	2.11 ††	2.07	0.053 ††	0.138	0.245 †	0.24	0.27 †	1.35	0.687	0.739
21100	18F1	0.275	2.4	0.429	2.37	3.37 ††	0.975 †	0.953 ††	0.74 ††	0.419 ††	1.54	1.15	1.08
21178	18F1									0.25 †	1.2	0.74	0.7
21229	18F1	0.402	2.26	0.454	2.32	1.22	0.273	0.386	0.341	0.133	1.6	0.952	0.936
21232	18F1	0.289	2.12	0.366 ††	2.12	1.16	0.1	0.24 †	0.2	0.452 ††	1.89 ††	1.19	1.58 ††
50004	18F1	0.238	2.11	0.491	2.38	1.45	0.255	0.396	0.239	0.16	1.33	0.881	0.87
50005	18F1	0.29	1.97	0.347 ††	2.08	1.34	0.387	0.382	0.28	0.155	1.41	0.991	0.906
50014	18F1	0.231	2.5	0.437	2.65	1.5	0.26	0.34	0.22	0.135	1.38	0.936	0.84
50020	18F1	0.24	1.98	0.42	2.26	1.18	0.05	0.05 ††	0.05 †	0.103	1.07	0.674	0.779
50024	18F1	0.14	1.99	0.19 ††	1.79	1.34	0.05	0.12 ††	0.13	0.053	1.1	0.581	0.622
50042	18F1	0.33	1.9	0.46	2	1.1	0.31	0.25	0.18	0.13	0.61 ††	0.32 ††	0.29 ††
52283	18F1	4.01 †	1.88	0.443	0.151 †	1.52	0.316	0.361	1.17 ††	0.132	1.41	0.914	0.89

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable Ca – Mehlich3 (18F1) mg/kg air dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
22	18F1	658 †	3870	1300	12400	2330	1640	4850	679	1690	1890	5400	1340
10156	18F1	555 †	1050 ††	3330 ††	10900	2260	1290 †	3740 ††	505 †	1910 ††	2170 ††	6270 ††	1650 ††
21100	18F1	749	3960	1470	13700	3130 ††	2010	5010	680	1720	1800	5110	1400
21178	18F1									1740	1850	5400	1450
21229	18F1	739	4320 †	1380	14500	2360	1620	5090	694	1720	1810	5560	1420
21232	18F1	723	3920	1370	11900	2540	1780	4860	723	1860	1900	5540	1460
50004	18F1	590 †	3410 †	1250 †	13700	2440	1920	5280 †	605	1810	1940	5300	1460
50005	18F1	752	3910	1390	6870 †	2390	1640	3650 ††	625	1690	1700	4790	1390
50014	18F1	734	4030	1380	13000	2390	1790	4790	667	1740	1850	5250	1420
50020	18F1	699	3910	1340	12700	2410	1730	4850	624	1680	1860	4860	1400
50024	18F1	752	4850 ††	1500 †	14900	2640 †	1800	6300 ††	689	1760	2010	5910	1460
50042	18F1	586 †	2710 ††	1030 ††	8170 †	1610 ††	1210 †	3330 ††	488 ††	1540 ††	1160 ††	3340 ††	942 ††
52283	18F1	756	4200 †	1370	13300	2530	1760	4880	698	1790	1890	5530	1440
52417	18F1					1730 ††	1360 †	3570 ††	434 ††	1090 ††	1200 ††	4250 ††	921 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable Cu - Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
22	18F1	0.945	3.08	1.44	2.17	2.19	1.74	2.23	2.83	4.29	3.35	3.01	2.54
8888	18F1	0.988	2.96	1.47	1.96	2.09	1.33	2.19	3.18	4.27	3.05	2.86	2.54
10156	18F1	0.832	0.897 ††	2.24 ††	1.38 †	2.58 ††	1.64	2.27	3.13	4.65	4.21 ††	3.49	3.26 ††
21100	18F1	1.06	2.92	1.5	2.19	2.94 ††	2.12 †	2.46	3.02	4.41	3.03	3.21	2.68
21178	18F1									4.4	3.1	3.1	2.7
21229	18F1	0.879	3.13	1.5	2.22	2.21	1.53	1.95	2.62	4.38	2.75	2.95	2.51
21232	18F1	0.836	2.83	1.32	2.05	2.22	1.67	2.21	2.81	4.75	2.82	3.31	2.48
50004	18F1	0.506	3.03	1.33	2.1	2.15	1.95	2.4	1.9 ††	4.8	3.2	3.14	2.73
50005	18F1	1.18	2.84	1.5	2.95 †	2.31	1.49	1.99	2.7	4.52	2.42	2.51 †	2.38
50014	18F1	1.03	3.41 ††	1.57	2.43	2.42 †	1.79	2.37	2.93	4.53	3.15	3.2	2.66
50020	18F1	0.725	2.67	1.25	1.91	2.17	1.57	2.12	2.5	3.97 †	2.88	2.57 †	2.32
50024	18F1	0.88	2.87	1.35	2.02	2.2	1.5	2.06	2.62	4.49	3.33	3.27	2.56
50042	18F1	0.44 †	1.6 ††	0.64 ††	1.2 †	1.2 ††	0.78 †	1.2 ††	1.4 ††	2.8 ††	1.6 ††	1.5 ††	1.3 ††
52283	18F1	0.798	3.03	1.39	2.19	2.24	1.65	2.38	2.77	4.43	3.34	3.24	2.62
52417	18F1					1.01 ††	0.64 †	0.65 ††	1 ††	1.89 ††	1.14 ††	1.01 ††	0.92 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable Fe – Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
22	18F1	217	205	56.1	88.9	141 †	363	263	171	187	70.9	158	111
8888	18F1	228	200	54.6	79.7	157	345	258	170	188	67.9	153	117
10156	18F1	201	40.7 ††	167 ††	72.1	94.6 ††	57.7 †	97.1 ††	356 ††	236	117 ††	248 ††	178 ††
21100	18F1	223	219	54.8	93.6	202 ††	370	289	186	182	59.6	148	98.7
21178	18F1									210	81	176	130
21229	18F1	238	233	62.5	102	157	382	271	175	196	57.6	153	106
21232	18F1	220	210	53.9	93	155	377	272	178	194	71.2	163	106
50004	18F1	185	179	50	75.9	161	296 †	274	155	205	63.5	163	118
50005	18F1	255	241	60	114	159	357	336 ††	222	175	59.3	105 ††	117
50014	18F1	239	226	58.3	92.1	162	327	277	187	215	67.2	173	117
50020	18F1	201	214	54.5	94.1	143 †	331	255	160	342 ††	127 ††	274 ††	206 ††
50024	18F1	197	184	46.9	77.6	163	327	245	162	176	61.9	162	104
50042	18F1	207	167	48	75	134 ††	262 †	217 †	135	32 ††	67	123 †	107
52283	18F1	220	225	60.8	103	161	371	282	194	172	104 ††	216 ††	167 ††
52417	18F1					105 ††	369	222 †	113 ††	124 ††	59.2	129 †	75.2 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable K – Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
22	18F1	244	606	84.4	216	384	28.1	132	521	41.5	564	457	560
10156	18F1	179	56.2 ††	447 ††	2.78 †	287	17	97.5 ††	355	45.4	613	510 †	633 ††
21100	18F1	247	566 †	88.8	212	530 ††	27.3	147	546	49.9	555	470	599
21178	18F1									40	517	454	565
21229	18F1	256	612	81.1	214	393	28.8	129	524	41.4	515	423	570
21232	18F1	236	575 †	76.7	216	423	14.8	130	585	45.9	498	458	548
50004	18F1	193	582	71.9	219	356	23.7	125	445	38.2	507	473	541
50005	18F1	233	619	83.1	275 †	401	27.4	161 †	459	45.1	560	548 †	550
50014	18F1	250	607	80.3	216	402	22.1	131	534	41.9	534	450	563
50020	18F1	193	487 ††	68.1	179 †	330	23.6	114	405	30	394 ††	324 ††	432 ††
50024	18F1	232	606	75.1	214	359	25.9	123	488	39.5	534	452	552
50042	18F1	88 †	200 ††	35 ††	88 †	115 ††	21	51 ††	174 ††	32	315 ††	289 ††	322 ††
52283	18F1	877 †	610	81.1	217	422	22.8	138	600	43.6	558	500	586
52417	18F1					805 ††	457 †	569 ††	902 ††	429 ††	958 ††	888 ††	999 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable Mg – Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	18F1	133	1290	72.4	1320	736	2150	1220	92.5	166	220	1030	259
10156	18F1	97.5 †	48.1 ††	955 ††	997 †	835 ††	2330	1350	90	184	232	1130 †	281
21100	18F1	138	1220	69.4	1320	986 ††	2370	1310	87.6	171	214	999	272
21178	18F1									174	218	1000	275
21229	18F1	140	1270	68.5	1390	746	2190	1290	85.6	173	219	1020	274
21232	18F1	135	1260	67.1	1250	709 †	2060	1170	82.6	168	202	981	257
50004	18F1	125	1220	69.6	14 †	760	2380	1370	78.7	178	219	1040	273
50005	18F1	136	1190	71.2	1310	746	2190	1360	119 ††	165	204	787 ††	255
50014	18F1	142	1310	69.4	1380	737	2280	1240	85.1	179	219	980	273
50020	18F1	125	1240	63.5 †	1210	721	2200	1230	74.1	171	221	955	269
50024	18F1	145	1360	73.5	1420	742	2280	1290	82.7	167	225	1030	269
50042	18F1	79 †	630 ††	34 ††	631 †	403 ††	1030 †	628 ††	40 ††	128 ††	96 ††	422 ††	117 ††
52283	18F1	148	1310	69.3	1400	761	2230	1300	76.1	163	205	947	258
52417	18F1					750	2450	1220	75	156	207	966	257

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable Mn – Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	18F1	150	96	90.2	154	118	60.6	111	397	305	829	304	663
8888	18F1	146	86.7	85.9	133	116	50.8	112	395	297	754	322	653
10156	18F1	158	75.2	66.9 ††	144	122	221 †	213 ††	130 ††	315	828	396 ††	674
21100	18F1	153	95.2	92.9	149	168 ††	74.7 †	135 ††	415	298	745	296	640
21178	18F1									259	748	285	645
21229	18F1	172 †	105	100	171	113	64.6	108	394	288	808	289	706
21232	18F1	160	87.2	94.4	158	105	58.7	91.1 ††	372	288	738	293	674
50004	18F1	141 †	96.6	95.7	150	113	47.2 †	113	367	299	710	300	599
50005	18F1	156	96	99.6	140	118	63.8	102	370	254	775	322	618
50014	18F1	172 †	108	99	173	130	66	123	431	320	862	321	754 †
50020	18F1	154	88.3	87.3	150	118	59.2	108	376	279	710	272	625
50024	18F1	156	99.5	96.2	161	135	61.4	123	398	283	740	293	621
50042	18F1	158	63 ††	81	140	107	42 †	107	321	261	598 ††	226 ††	511 ††
52283	18F1	174 †	93.3	97.7	147	118	64.4	112	419	277	717	280	598
52417	18F1					103	61.8	111	396	277	797	329	689

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable Na - Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	18F1	73.5	283	31.2	170	46.6	4570	41.3	7.33	7.18	27.5	17.7	38.6
10156	18F1	49.6 †	22.1 ††	199 ††	104 †	38	515 †	32.8	30 ††	32.4	101 ††	69 ††	144 ††
21100	18F1	86.3	273	35.5	171	141 ††	5350 †	35.1	4.68	14	30.6	23.4	46
21178	18F1									26	55 ††	64 ††	64 ††
21229	18F1	78.3	296	30.9	179	49	4770	28.9	5.51	7.9	25.7	17.7	42.2
21232	18F1	79.9	314	36.5	192	51.9	4780	34.7	10.6	14.3	26.7	31.3	42.2
50004	18F1	46.7 †	273	25	185	43.3	4760	32.2	5.49	8.59	28.5	21.8	45.7
50005	18F1	34.1 †	287	32.6	265 †	59.1	4710	47.5	10.2	15.5	44.9 ††	40.4 †	46.5
50014	18F1	80.4	307	36.5	191	57.5	4840	39.7	9.16	15.2	31.5	32	45.3
50020	18F1	61.4	237	23.9	151	51	4590	39.6	3.56	12.1	29.4	19.7	44.2
50024	18F1	76.6	300	31	185	49.7	5450 †	39.3	4.6	8.28	28.1	19.8	43
50042	18F1	72	257	42	173	64	2500 †	56	30 ††	38 †	62 ††	57 †	75 ††
52283	18F1	408 †	290	27.3	165	62.2	4940	60.2	42 ††	17.1	8.65 ††	19.2	41.7
52417	18F1					419 ††	5940 †	419 ††	384 ††	358 ††	378 ††	401 ††	384 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable P - ICP — Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	18F1	29.1	14.7 †	11.7	2.75	19.6	53.2	39.2	41.1	4.26	28.4	26.5	99
10156	18F1	27.7	9.08 ††	16 ††	2.78	14.7 ††	31.4 †	28.4 ††	19.2 †	48.8 ††	412 ††	264 ††	912 ††
21100	18F1	26.5	13.4	6.98	2.44	20.5	44.9	37.6	31.6	3.93	30.3	27.3	92.7
21178	18F1									4.1	35	29	105
21229	18F1	26.1	13.5	9.6	2.66	20	53.7	36.4	38.3	4.22	31.2	27.3	101
21232	18F1	26.9	13.9	10.8	3.13	19.4	61.5	39.3	40.5	3.79	35.4	28	101
50004	18F1	17.3 †	9.82 ††	7.27	2.18	15.9 ††	36.2 †	34.7	27.4	2.63 ††	29.6	25.8	92.4
50005	18F1	30.6	13.8	9.1	3.11	19.7	53.8	36.6	36.6	4.21	31.3	26.9	101
50014	18F1	27.9	13.6	8.64	2.16	20	57.7	40.9	41.4	3.62	31.1	27.8	103
50020	18F1	24.7	13.5	9.98	2.82	21.7	55.4	41.1	39.1	4.59	34.6	26.5	101
50024	18F1	24.4	12.2 †	7.8	2.1	18.2	44.3	36.2	35.8	4.13	33.3	27.1	96.5
50042	18F1	16 †	5.9 ††	8.7	1.2	7 ††	17 †	12 ††	14 ††	1.3 ††	16 ††	9.6 ††	45 ††
52283	18F1	28.6	13.7	9.61	3.39	21.8	56.5	42.6	42.6	3.26 †	38.9	30.5 ††	109
52417	18F1					18.7	52.7	38.4	36.2	1.68 ††	28.3	28.1	92.7

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable S - Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	18F1	17.1	12.2	51.7	16.8	14.6	7270	21.4	41.9	9.2	47.8	22.1	42.9
10156	18F1					2.73 ††	905 †	1.46	4.18 ††				
21100	18F1					190 ††	7690	97.2 ††	7.46 ††	22.9 ††	37.7	56.8 ††	53.3 ††
21178	18F1									9.4	50	24	47
21229	18F1	16.2	12.3	45.5	16.5	14.1	7430	11.8	37.8	8.93	45.4	21.7	43.4
21232	18F1	17.4	12.5	50.4	17.1	15.7	7670	9.38	41.9	9.48	46.5	23.5	44.6
50004	18F1	8.77 †	21.8 ††	25.4 ††	68.4 †	42.4 ††	5070 †	90.2 ††	24.9	12.3 †	42.8	22.5	40.9
50005	18F1	17.7	12.5	51.5	16.7	13.7	7290	9.5	35.1	9.01	45.8	14.9 ††	42.1
50014	18F1	16.8	12.2	48.9	16.5	15.4	7130	10.6	38.2	8.91	45.7	23.3	44.1
50020	18F1	16.5	13.4	48.3	20.9 †	17.2	6640	15	37.3	14.9 ††	52.4	23.3	46.2
50024	18F1	19.2	25.5 ††	49.8	40.8 †	17	1240 †	18.6	31.1	0.2 ††	34.4	5.57 ††	30 ††
50042	18F1	8.2 †	4 ††	38 ††	7.8 †	9.3 ††	4970 †	8.6	29	4.6 ††	30 ††	14 ††	32 ††
52283	18F1	19.5	13.6	47.4	18.9 †	17	7360	24.3	38.6	7.71 †	49.4	22.4	42.3

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable Zn — Mehlich3 (18F1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
22	18F1	0.836	0.754	4.05	0.435	4.28	21.6	1.27	1.18	2.72	1.2	1.42	4.02
8888	18F1	0.93	0.794	4.2	0.407	3.54	20.9	0.942	0.922	3.33	1.33	1.7	4.58
10156	18F1	0.371 †	3.07 ††	0.056 ††	0.028 †	3.79	22.1	1.14	1.24	3.83	1.75 ††	1.82	4.6
21100	18F1	0.987	0.784	4.66	0.513	5.84 ††	27.6 †	1.07	1.08	2.62	1.15	1.53	3.84
21178	18F1									2.9	1.1	1.4	4.2
21229	18F1	0.775	0.833	3.85	0.416	3.77	23	1.11	1.02	3.11	1.02	1.47	4.06
21232	18F1	1	0.834	4.19	0.583	4.01	24.3	1.22	1.23	2.72	1.05	1.51	3.81
50004	18F1	0.576	0.547 ††	4.17	0.328	4.24	27 †	1.1	0.998	3.2	1.12	1.51	4.08
50005	18F1	0.93	0.801	4.3	0.488	3.76	22.2	1.09	1.16	2.87	1.16	1.55	4.1
50014	18F1	0.949	0.926	4.52	0.504	4.09	24.9	1.25	1.22	3.16	1.22	1.86	4.38
50020	18F1	0.726	0.715	3.88	0.405	4.13	22.8	1.2	1.15	2.83	1	1.29	3.79
50024	18F1	0.95	1.06 ††	4.77	0.71 †	3.91	20.6	1.07	1.03	2.55	1.01	1.36	3.64
50042	18F1	0.72	0.57 ††	4	0.32	3.6	19	0.83	0.77	3.3	0.91	1.2	3.5
52283	18F1	0.823	0.811	4.26	0.496	3.59	22.1	1.02	0.875	2.53	0.843	1.57	4.62
52417	18F1					1.87 ††	10.1 †	0.05 ††	0.1 ††	1.09 ††	0.05 ††	0.19 ††	1.67 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Extractable K — Bicarbonate (18A1) mg/kgair dry											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
20204	18A1	272	507 †	98.8	260	429	43	209	689	56.9	513	494	583
21088	18A1	390	880 †	160 †	320	510	45	100 ††	680	47.6	535	450	574
21100	18A1	306	615	79.2	199	460	54.5	203	612	125	680	494	649
21138	18A1									64.2	552	467	597
21193	18A1	260	540 †	84	193	374	52	189	529	65	486	408	591
21196	18A1					457	50.5	221	623				
21232	18A1	453	635	111	193	412	45.3	190	578	91.6	524	465	561
50017	18A1	25.6 †	175 ††	506 ††	71.4					61.7	609	495	665
50020	18A1	562 †	156 ††	89.6	352	497	92.3 †	276 ††	752	122	596	462	638
50024	18A1					428	76.5 †	241	645				
50027	18A1	309	637	103	203	399	29	187	548	47	548	426	617
52437	18A1	288	631	385 ††	280	180 ††	117 †	137 †	176 ††				

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Total Organic Matter (6G1) %											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
50005	6G1	2.1	1.32	7.08	2.88	1.48	2.54	1.98	3.92	0.838	5.12 ††	5.08	6.5
50020	6G1	3.2	5.8	11.3	8.6	4.72	7.26	5.82	6.52	3.55	14.3	10.3	11.1
50029	6G1	1.7	2.08	9.72	3.53	1.66	4.31	3.35	4.07	1.3	9.24 †	6.01	8.18
50030	6G1	2.95	5	11.6	7.32	4.36	6.44	5.92	6.41	3.03	13.7	8.97	10.8
52334	6G1	2.9	4.1	10.2	7.1	5.57	8.29	8.77	7.1				
52417	6G1					3.75	8.64	5.47	6.21	3.04	14.7	6.14	10.3

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Aqua Regia Digestible Calcium (17B1 + 17B2) mg/kg											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
10156	17B2					3740 ††	2530	12800	1100 ††	2930	2240	6910	2160
21229	17B1	897	2170 †	2390	22800	3340	2120	13100	804	2740	2260	6630	2100
50004	17B2	719	3940	1710 †	23800	3350	2340	11700	926	2900	2270	6730	2020
50005	17B2	792	5690	2220	25200	3350	2140	12500	784	3010	2440	7900 †	2050
50017	17B2	10000 †	4960	2250	21000								
50019	17B1					3000 ††	1830	9320	727	2400	1890	6620	1910
50020	17B1	870	5380	2420	25800	3260 †	2170	12200	824	2970	2580	7960 †	2250
50044	17B1					3300	2100	10000	870	2400	3000 †	8700 ††	2300
52417	17B1					2290 ††	1850	8710	880	2380	1410 †	6280	1730 †

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Aqua Regia DigestibleCopper (17B1 + 17B2) mg/kg											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
10156	17B2					14.7	9.18	35.7	20.8	25.8	54.3	24	22.4
21229	17B1	7.37	7.6 ††	13.1	25.2	15.8	6.03	47.4	18.8	28.4	65.7	27.2	25.1
50004	17B2	8.32	19.1	12.1	21.5	18.8	11	54.1	21.4	29.6	71	26.3	23.9
50005	17B2	9.54	19.2	14.3	26.2	16.7	9	37.9	20.2	29.3	60.2	27.4	24.2
50017	17B2	10.8	22.5	16.8	30					27.9	71.1	28.7	25.8
50019	17B1					11.2	8.03	36.4	12.8	21.4	39	23.6	21.3
50020	17B1	8.06	20.3	15.9	28.3	16.1	9.83	50.4	18.3	28.6	61.5	27.8	25
50044	17B1					11	6	26	12	23	31	18	15 ††
52417	17B1					10.9	5.3	31.6	11.8	23.9	38.9	22.6	17.6

Lab. Code #	Method Codes	Soil sample identification and values for 2016:Aqua Regia DigestibleIron (17B1 + 17B2) mg/kg											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10156	17B2					19500	28900	33600	14900	14600 ††	49300 ††	21900 ††	27600 ††
21229	17B1	13400	14000 ††	21300	41200	23800	29100	44500	18300	29700	96400	42800	54100
50004	17B2	15300	36600	28300	30200	24100	36400	53300	18600	31200	105000	40900	56300
50005	17B2	13400	33800	19000	43500	26200	18700	52100	21500	30700	115000	47400	63500
50017	17B2	14000	31600	24100	38700					32400	117000	47100	60800
50019	17B1									26200	98300	44700	57200
50020	17B1	13000	32800	25800	45000	32300	45800 †	56700	20500	30300	105000	44800	57200
50044	17B1					17000	27000	33000	13000	25000	98000	30000	39000 †
52417	17B1					13700	25500	33000	12900	21500	89900	24100	45100 †

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Aqua Regia DigestibleMagnesium (17B1 + 17B2) mg/kg											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	ASS 1603-2	ASS 1603-3	ASS 1603-4	ASS 1606-1	ASS 1606-2	ASS 1606-3	ASS 1606-4	ASS 1609-1	ASS 1609-2	ASS 1609-3	ASS 1609-4
10156	17B2					3730	3750	19300	964	5980	3870 ††	4970	1170
21229	17B1	786	2240 ††	880	6600	3540	3480	20800	725	5520	1080	4380	1020
50004	17B2	703	5960	596	6860	3740	3970	19600	1020	6210	1410	4560	1210
50005	17B2	789	5660	2220 ††	25400 †	3880	4080	22400	736	6290	1070	4870	925
50017	17B2	770	5150	707	5870					5570	1230	4490	1130
50019	17B1					1970	2660 †	17800	139	4040	444	3890 †	798
50020	17B1	595 †	5330	778	6220	3180	3520	20100	579	5030	1000	4440	884
50044	17B1					3200	3400	17000	520	4800	1200	5300 †	970
52417	17B1					2850	3650	16800	263	4090	560	3010 †	531 †

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Aqua Regia DigestibleManganese (17B1 + 17B2) mg/kg											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
10156	17B2					349	105	953	1270	686		1190	3030
21229	17B1	339 †	173 ††	834	860	346	91.4	984	1330	645	3820	1170	2890
50004	17B2	387	447	849	587	366	121	955	1240	582	3850	1090	2920
50005	17B2	366	373	693 ††	678	334	102	767 ††	1650 ††	612	5050 ††	1050	3840 ††
50017	17B2	370	402	818	766					632	3800	1140	2880
50019	17B1									631	4140 †	1190	3120 †
50020	17B1	364	430	896	816	351	110	1360 ††	1560 ††	679	3730	1270	2980
50044	17B1					290	82	610 ††	1000 ††	560	4000	880 ††	2100 ††
52417	17B1					330	87.3	933	1280	634	3780	1130	2910

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Aqua Regia DigestibleSodium (17B1 + 17B2) mg/kg											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
0156	17B2					245	7700	854	83	136 †	184	150	131
21229	17B1	102	195	210	357	158	6920	476	30.6	57.6	150	86.8	84
50004	17B2	101	480	263	346	222	7220	603	87.7	283 ††	285	145	147
50005	17B2	137	694	487	513 †	257	7660	454	61	210 †	242	172	148
50017	17B2	1500 †	610	327	470 †					272 ††	211	125	125
50019	17B1					83	6860	268	21	53	103	129	116
50020	17B1	85.1	422	149	338	158	6940	429	15.3	58.3	192	99.7	119
50044	17B1					120	7200	510		54	190	110	110
52417	17B1					55	3440 †	120	7	15 †	57	28	42 ††

Lab. Code #	Method Codes	Soil sample identification and values for 2016: Aqua Regia DigestibleZinc (17B1 + 17B2) mg/kg											
		March 2016 (Round 3)				*June 2016 (Round 6)*				*September 2016 (Round 9)*			
		ASS 1603-1	**ASS 1603-2**	**ASS 1603-3**	**ASS 1603-4**	**ASS 1606-1**	**ASS 1606-2**	**ASS 1606-3**	**ASS 1606-4**	**ASS 1609-1**	**ASS 1609-2**	**ASS 1609-3**	**ASS 1609-4**
10156	17B2					62.6 †	58.6	76.8	40.6	67.3	57.8	59.2	36.6
21229	17B1	12.8	21.7	63.4	40.7	42.4	40.6	53.6	23.9	70.6	59.3	61.6	35.8
50004	17B2	11.8	35.4	47.8	28.9	47.3	49.5	64.4	31.4	73.7	76.2	65.5	43.6
50005	17B2	21.8	13.6	55.3	42.9	45.9	44.5	58.4	28.4	79.2	63.1	65.2	41.3
50017	17B2	16	55	71.4	49.2					74.6	83.8	72.2	49.3
50019	17B1					20.4 ††	32.4	49.6	8.84	56.6	41.9	60.4	38.9
50020	17B1	11.3	49	71.2	40.3	41.5	44.9	62.7	21.4	71.2	54.9	60.1	35.7
50044	17B1					30	33	41	15	60	31	46	25 ††
52417	17B1					39.7	44.3	73.3	16.1	88.8 ††	49.3	55.9	39

[i] Unless otherwise indicated, soil method codes are as defined by Rayment, G.E. and Lyons, D.J. (2011). *Soil Chemical Methods - Australasia*. CSIRO Publishing, Collingwood, Victoria, Australia.

[ii] These are ASPAC endorsed tests, where "O" in the code refers to Olsen extractable P, and "C" refers to Colwell extractable P. See the table Notes for more details.

[iii] Unless otherwise indicated, soil method codes are as defined by Rayment, G.E. and Lyons, D.J. (2011). *Soil Chemical Methods - Australasia*. CSIRO Publishing, Collingwood, Victoria, Australia.